ORDER NO. MD9703025C2

Service Manual

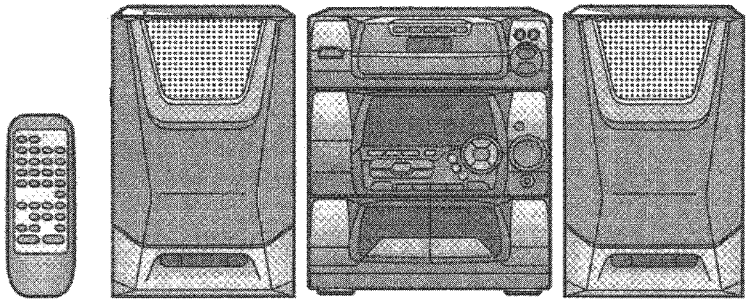
COMPACT disc DIGITAL AUDIO

MASH*1 multi-stage noise shaping

*2 DOLBY B NR

CD Stereo System

SA-AK20



Remote Control Transmitter | SB-AK20 | SA-AK20 | SB-AK20

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	

*1 MASH is a trademark of NTT.

*2 Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

System	Music Center	Speaker
SC-AK20 (E)	SA-AK20 (E)	SB-AK20 (E)
SC-AK20 (EB)	SA-AK20 (EB)	
SC-AK20 (EG)	SA-AK20 (EG)	

TAPE SECTION : AR2 MECHANISM SERIES
CD SECTION : RAE0150Z TRAVERSE DECK SERIES

■ Specifications

■ Amplifier Section

1 kHz continuous power output
- **Both channels driven** 2 x 35W (THD 1%, 6 Ω)
- **RMS** 2 x 50W (THD 10%, 6 Ω)

Total harmonic distortion
- **Half power at 1 kHz** 0.09% (6Ω)

Frequency response
- **AUX** 60Hz – 20kHz(-3db)

Input sensitivity and impedance
- **AUX** 250mV,22KΩ

Tone controls
- **6 EQ SPACE** HEAVY,CLEAR,SOFT,DISCO,LIVE,HALL

V.BASS (volume at -30dB) 63Hz, 7dB

Load impedance 6Ω

■ FM Tuner Section

Frequency range 87.5 – 108.0 MHz

Sensitivity 23.3 dBf

Total harmonic distortion
- **MONO** 0.3%
- **STEREO** 0.5%

S/N
- **MONO** 60dB

Antenna terminal(s) 75 Ω (unbalanced)

■ AM Tuner Section

Frequency range 522 – 1611 kHz

Sensitivity (for 50mW, 500mW)
- **MW(at 999kHz, 1000kHz)** 250 μV/m

■ Cassette Deck Section

Track system 4 track, 2 channel

Heads
- **Record/playback** Solid permalloy head(Rotary head)
- **Erasure** Double gap ferrite head

Motor DC servo motor

Recording system AC bias 100 kHz

Erasing system AC erase 100 kHz

Tape speed 4.8 cm/s

Frequency response
- **NORMAL** 35 Hz – 14 kHz(+3dB,-6dB)
- **HIGH** 35 Hz – 14 kHz(+3dB,-6dB)

S/N (HIGH)
- **Dolby NR off** 50 dB (A weighted)
- **Dolby NR on** 60 dB (CCIR)

Wow and flutter 0.18 % (WRMS)

Fast forward and rewind time Approx. 120 seconds with C-60 cassette tape

Panasonic®

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⚠ WARNING

This service information is designed for experiense repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

■ CD Section

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source/wave length	Semiconductor laser / 780 nm
Number of channels	Stereo
Frequency response	20Hz – 20kHz (+1dB, -2dB)
S/N	
CD UNIT OUT	95 dB (JIS. A)
SP OUT	87 dB (JIS. A)
Wow and flutter	Below measurable limit
Digital filter	8 fs
D/A converter	MASH (1 bit DAC)

■ General

Power consumption	120W
Power supply	
for E, EG	AC 230 V, 50 Hz
for EB	AC 230 – 240V, 50 Hz
Dimensions (W x H x D)	270 x 330 x 314 mm
Weight	7.6 kg

Notes :

1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

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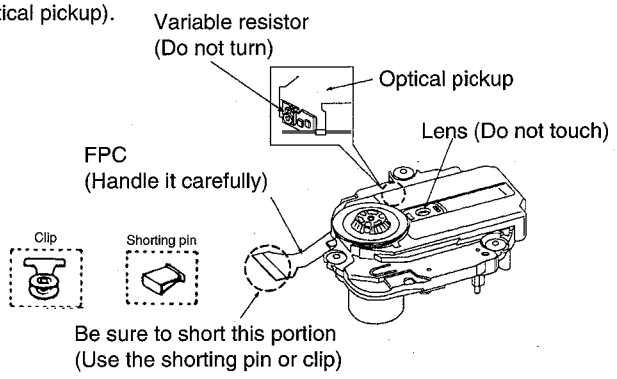
■ Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

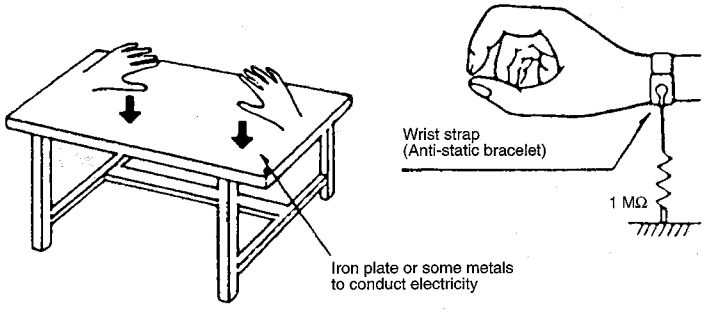
1. Do not subject the traverse deck (optical pickup) to static electricity as it ie extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FPC board). When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



• Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



■ Precaution of Laser Diode

CAUTION : This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.
Wavelength : 780 nm
Maximum output radiation power from pick up : 100 μW/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge : 780nm
Maximale strahlungsleistung der lasereinheit :100μW/VDE

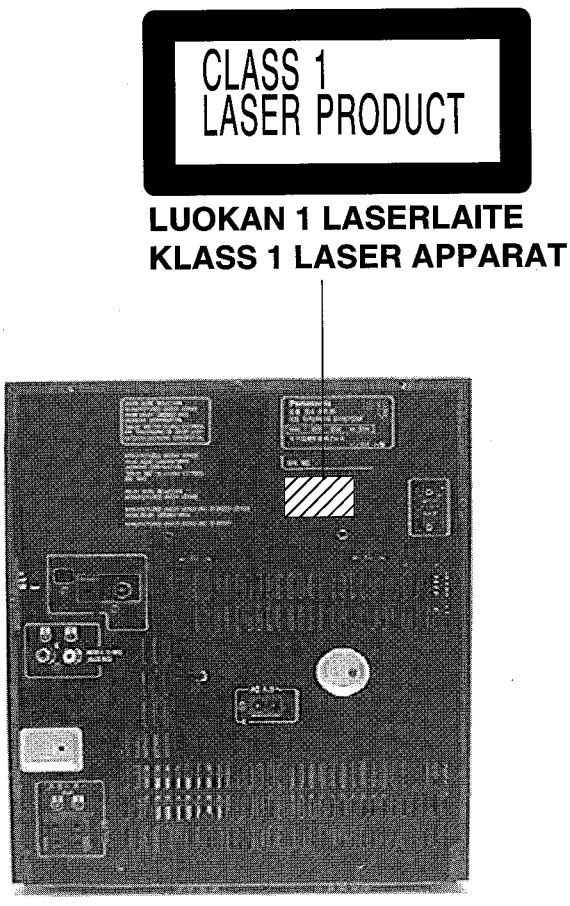
Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

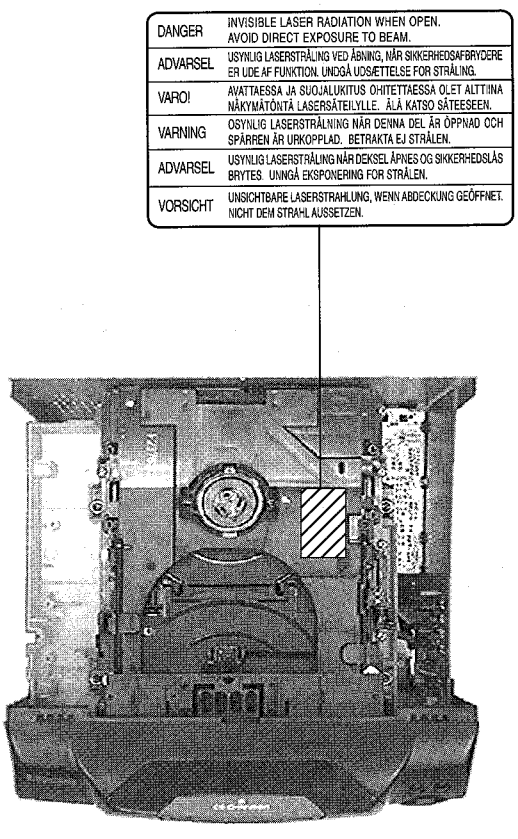
1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährlich ist.
2. Den werkseitig justierten einstellregler der lasereinhit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.

ADVARSEL: I dette a apparat anvendes laser.

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels




DANGER INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVARSEL USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

■ Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION !
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

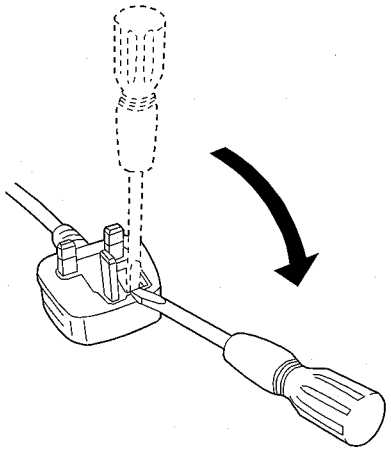
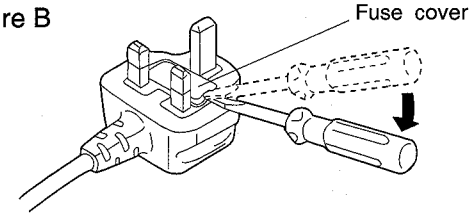


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

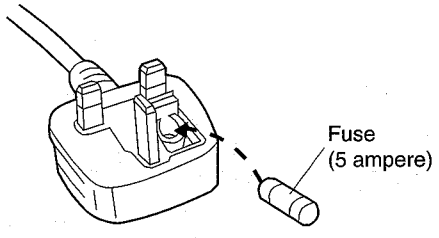
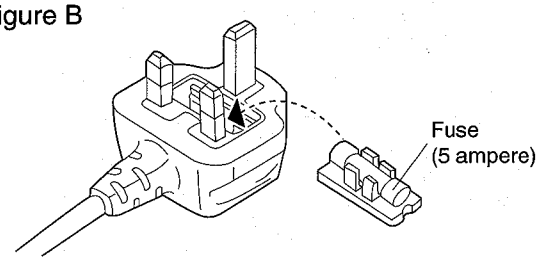


Figure B



■ Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C513, C514 and C515 through a 10Ω , 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

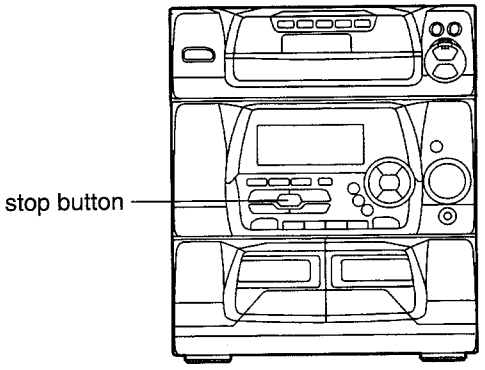
Current consumption at AC 230V(for E, EG) or 230-240V(for EB), 50 Hz in NO SIGNAL mode should be ~300mA.

■ Before Moving or Shipping This Unit

Before moving or shipping this system:
Prepare the system as described below to prevent damage to the mechanism.

1. Remove all CDs.
2. Press CD.
3. Press stop button (■) for 5 seconds. The display will change from "WAIT" to "LOCKED" to "GOOD BYE" and finally "ZZZ". Then the unit will be turned off automatically. (This will set the so-called "shipping mode".)
4. Unplug the system. The shipping mode will turn off automatically when you turn the power on the next time.

Avoid strong vibrations or impact while moving the equipment. The shipping mode will turn OFF automatically when you turn the power ON the next time.



■ Operation Checks and Main Component Replacement Procedures

"ATTENTION SERVICER" Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**
4. **Refer the Parts No. on the page of "Main Component Replacement Procedures", if necessary.**

• Contents

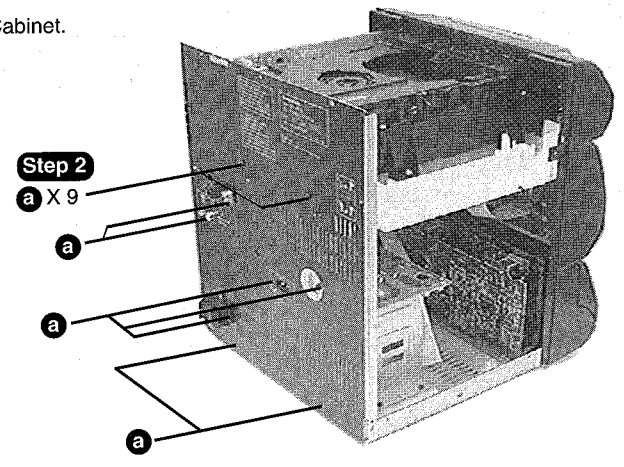
	page
• Checking Procedure for each major P.C.B.	
1. Checking of the Main, Panel, Deck and Servo P.C.B.	5 ~ 7
• Disassembly of the CD Changer Unit	7 & 8
• Assembly of the CD Changer Unit	8 & 9
• Main Component Replacement Procedures	
1. Replacement of the Traverse Deck	9
2. Replacement of the Power Amplifier IC and Regulator Transistors	10

Warning : This product uses a laser diode. Refer to caution statement on page 2.
ACHTUNG : • Die lasereinheit nicht zerlegen.
• Die lasereinheit darf nur gegen eine vom hertsteller spezifizierte einheit ausgetauscht werden.

■ Checking Procedure for each major P.C.B.

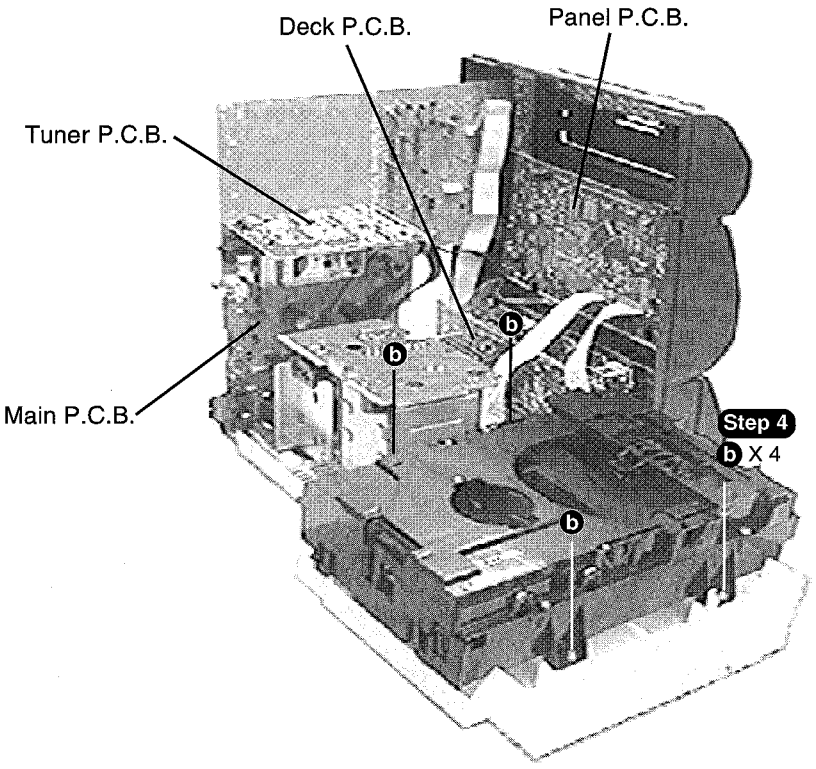
1. Checking of the Main, Panel, Deck, Tuner and Servo P.C.B.

Step 1 Remove the Top Cabinet.

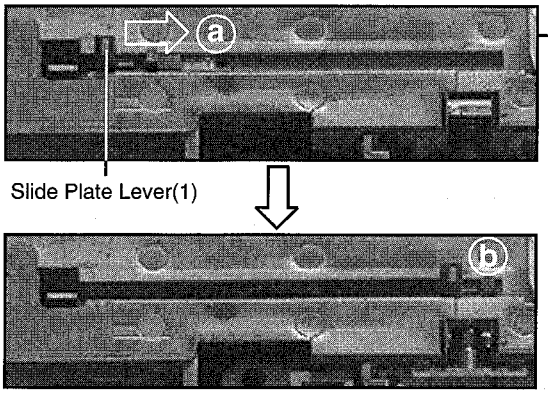


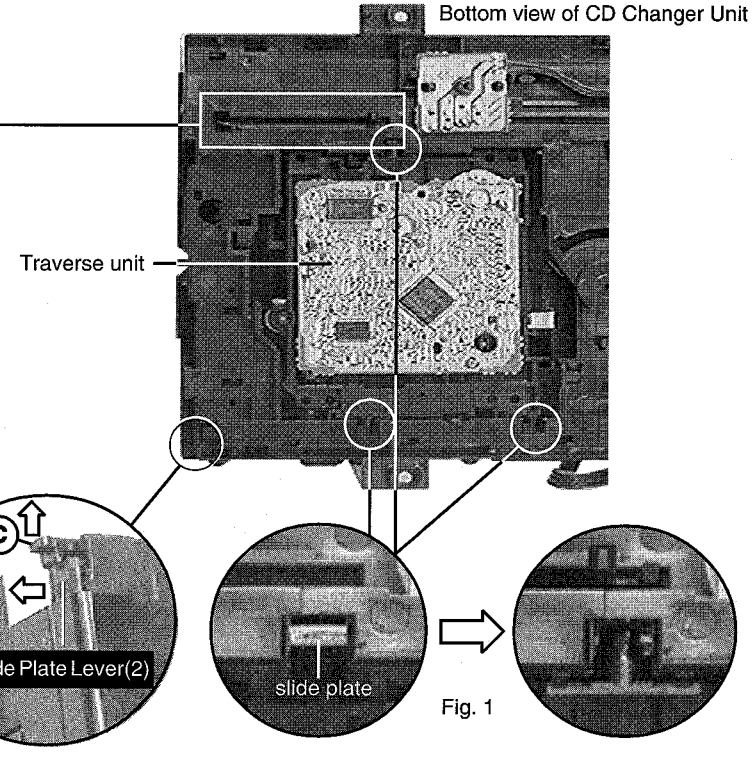
ⓐ [XTBS3+8JFZ1] (Black)	ⓑ [RHD30048] (Brass)

Step 3
Place the CD changer as shown on the right and check the Main P.C.B., Panel P.C.B. and Deck P.C.B.



• Disassembly of the Traverse Unit

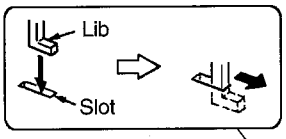


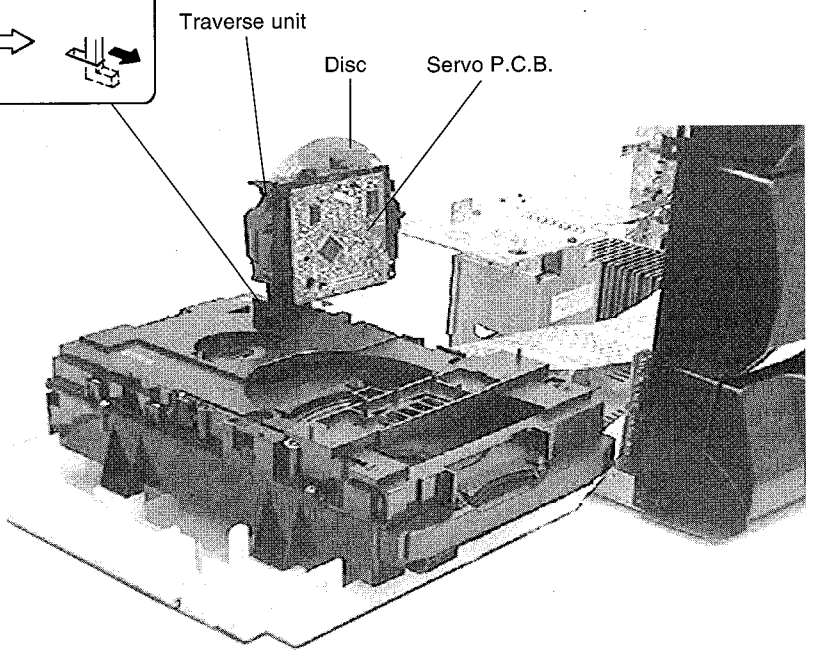


Step 5
Move the Slide Plate Lever(1) in the direction of arrow ⓐ to the position ⓑ and hold it, then lift up the stopper ⓒ until the Slide Plate Lever(2) eject out. Now the 3 slide plate will be open as shown in the figure 1 on the right and the traverse unit can be removed.

Fig. 1

Step 6
Slide in the Traverse Unit into a slot on the top of the CD Changer Unit and then stand it.

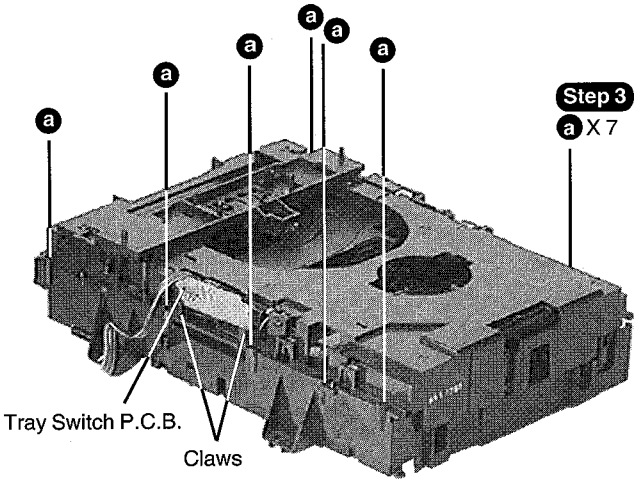




Step 7
Attach the disc and clamper with magnet to the Traverse Unit as shown in the diagram on the left, then check the Servo P.C.B.
(Refer to page 11 of how to check the CD Unit without connecting to the CD Changer Loading Mechanism.)

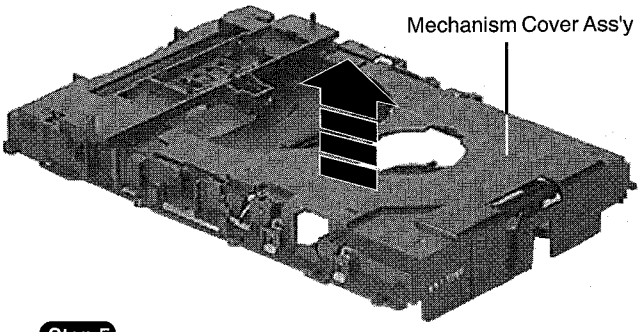
■ Disassembly of the CD Changer Unit

Step 1 Follow the procedures in 'Checking Procedure For Each Major P.C.B.' (**Step 1** ~ **Step 4**).

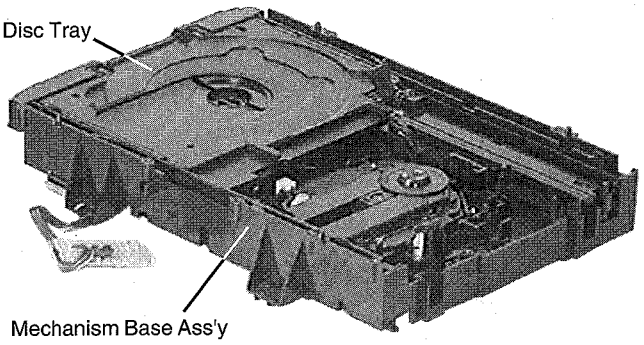


Step 2 Remove the Tray Switch P.C.B.

Step 4 Remove the Mechanism Cover Ass'y.

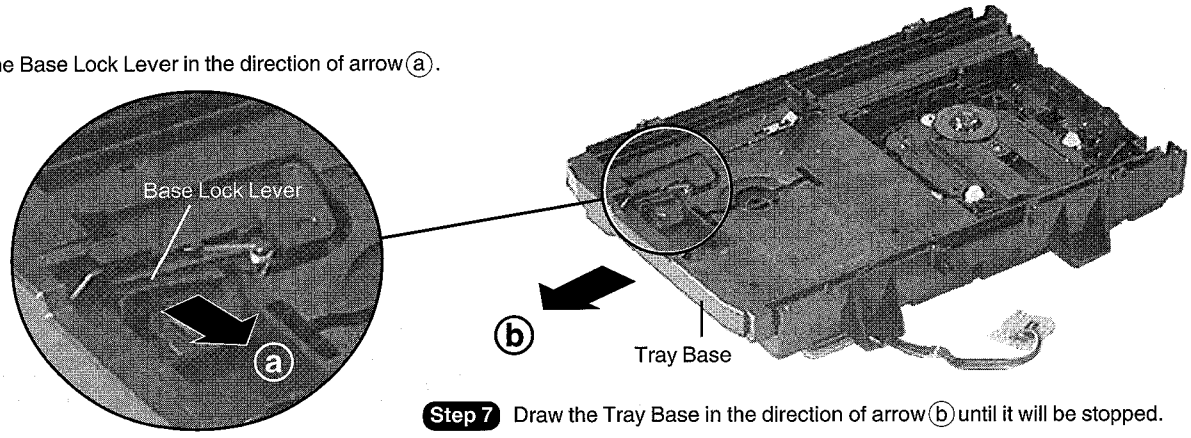


Step 5
Remove the Disc Tray sided on the Mechanism Base Ass'y.



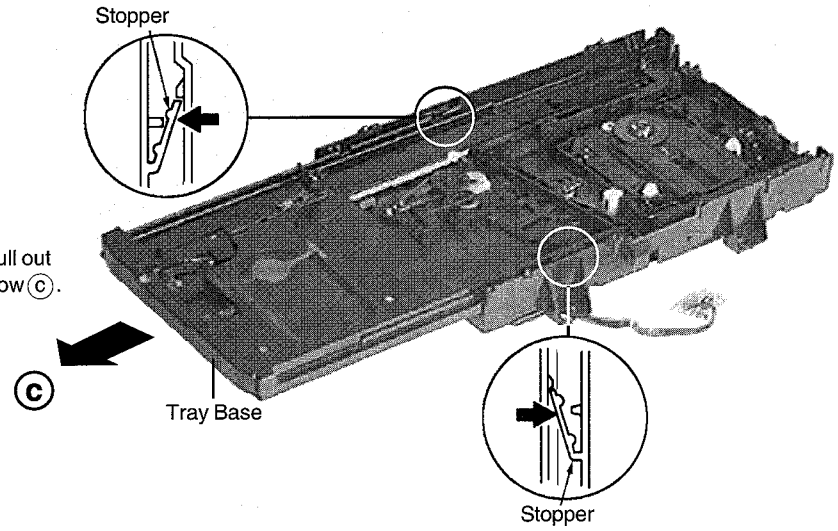
a
[XTB3+10JFZ]
(Black)

Step 6
Unlock the Base Lock Lever in the direction of arrow ⓐ.



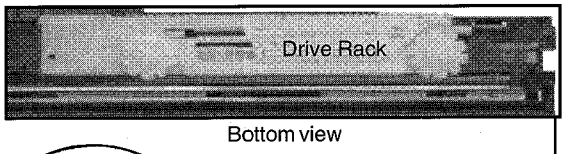
Step 7 Draw the Tray Base in the direction of arrow ⓑ until it will be stopped.

Step 8
Release 2 stoppers manually and pull out the Tray Base in the direction of arrow ⓒ.

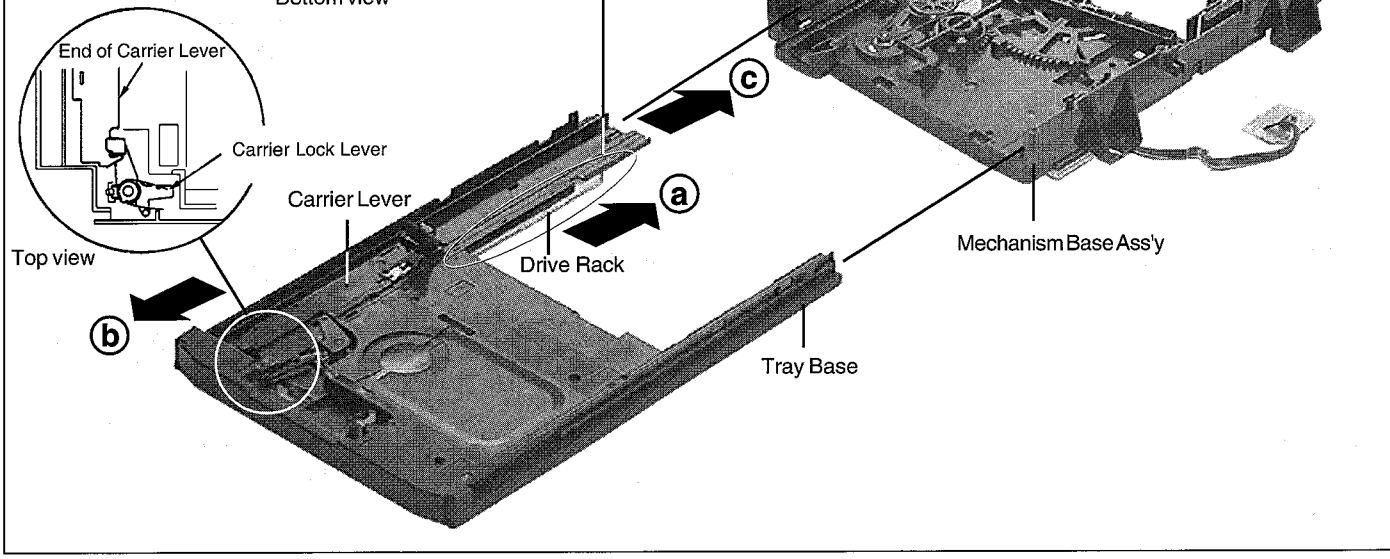


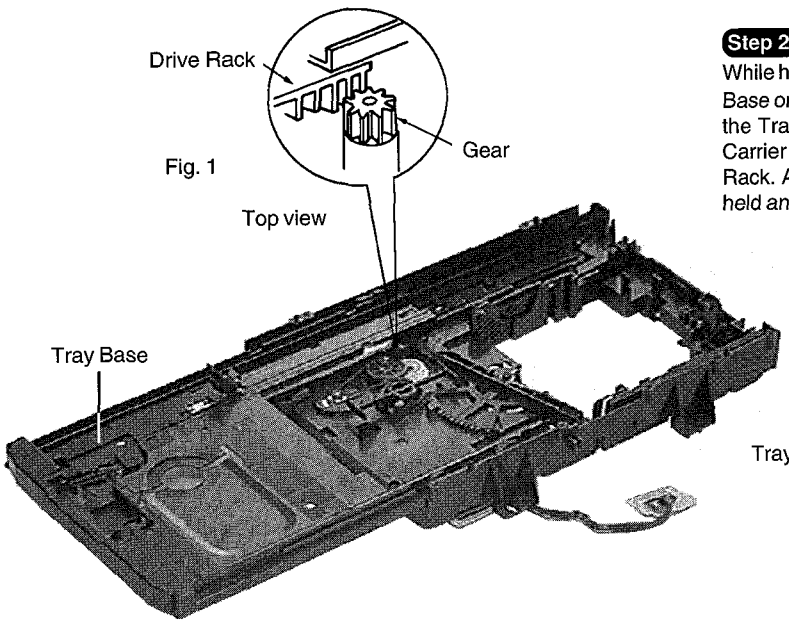
■ Assembly of the CD Changer Unit

Step 1
Move the Drive Rack in the direction of arrow ⓐ to the position as shown in the diagram below and the Carrier Lever in the direction of arrow ⓑ fully until the Carrier Lever is locked.

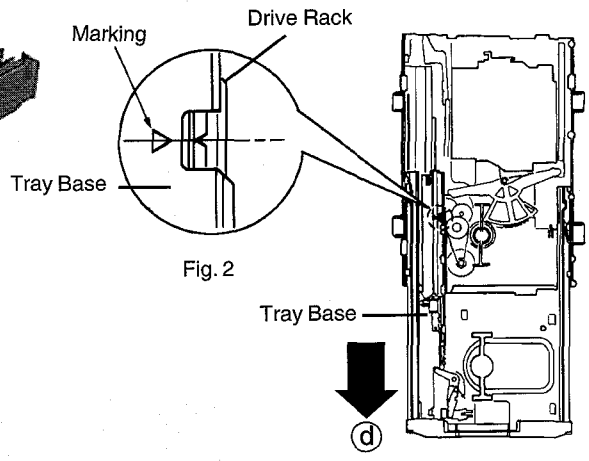


Bottom view





Step 2
While holding the Drive Rack and Carrier Lever, insert the Tray Base on the Mechanism Base in the direction of arrow ⓒ until the Tray Base stops as shown in figure 1. Release only the Carrier Lever and push the Tray Base together with the Drive Rack. After engaging the gear, release the Drive Rack which held and feed the Tray Base slowly.

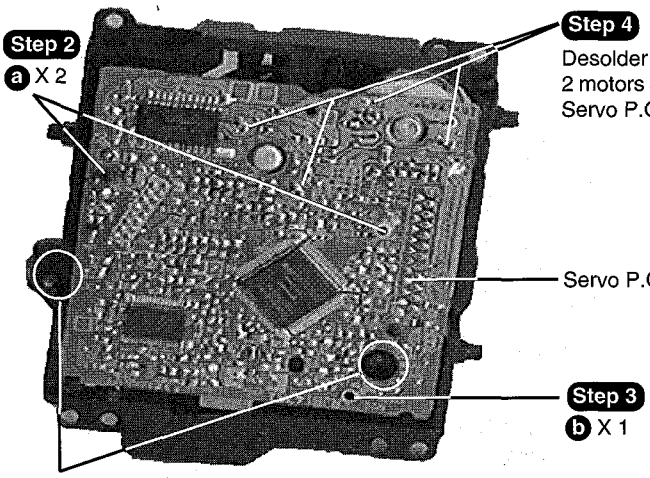


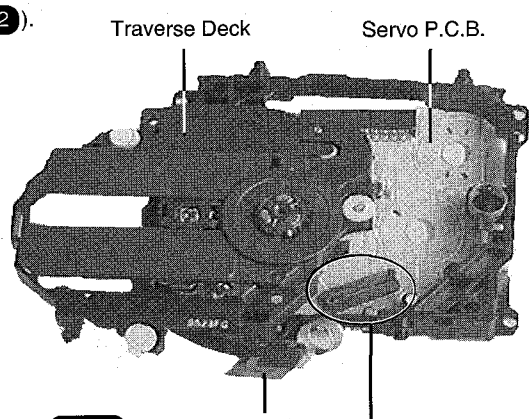
Step 3
Draw the Tray Base in the direction of arrow ⓓ to the end until it stops. Make sure the mark '▽' on the Tray Base is aligned with the mark '△'on the Drive Rack as shown in figure 2 before closing the Tray Base. (In case that the statement above is not operated, draw the Tray Base again from step 2)

■ Main Component Replacement Procedures

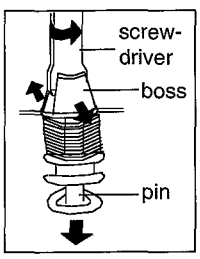
1. Replacement of the Traverse Deck

Step 1 Follow the procedures in 'Disassembly of the Traverse Unit' (**Step 1** ~ **Step 2**).

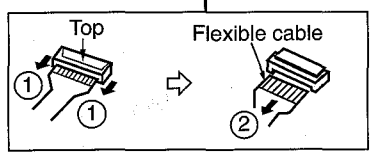


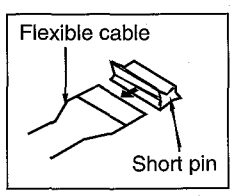


Step 5 Widen the 2 bosses with a flat screwdriver and pull out the 2 pins. Then remove the Traverse Deck.



- Removal of the flexible cable
  Push the top of the connector in the direction of the arrow ①, and then pull out the flexible cable in the direction of the arrow ②.





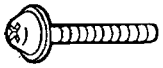
Note :
Insert a short pin into the flexible cable for traverse unit.

ⓐ [XTV2+6G] (Brass)

ⓑ [XTN2+6G] (Brass)

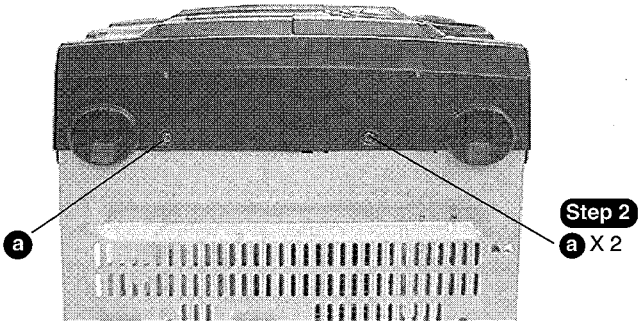
2. Replacement of the Power Amplifier IC and Regulator Transistor.

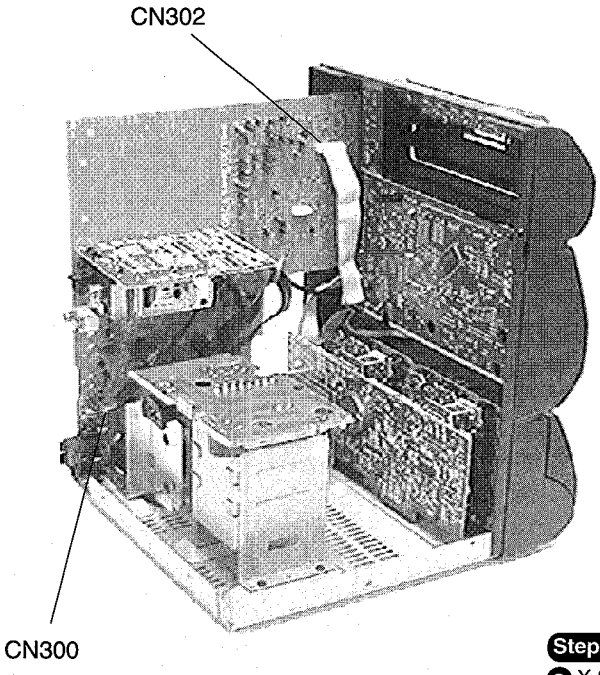
ⓐ [XTB3+8JFZ] (Black)



ⓑ [XTW3+15T]

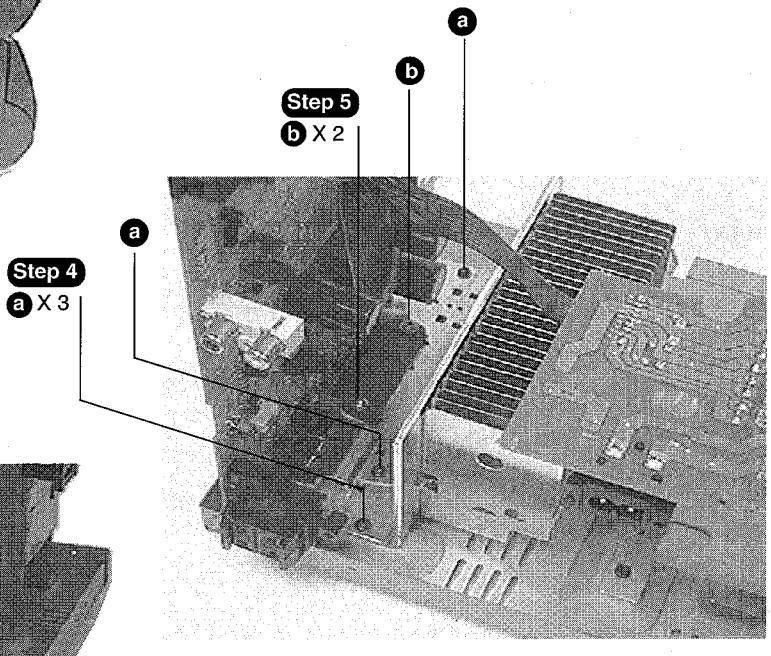
Step 1 Follow the procedures in 'Checking of the Main, Panel, Deck and Servo P.C.B.' (Step 1 ~ Step 3) and remove the CD changer unit.

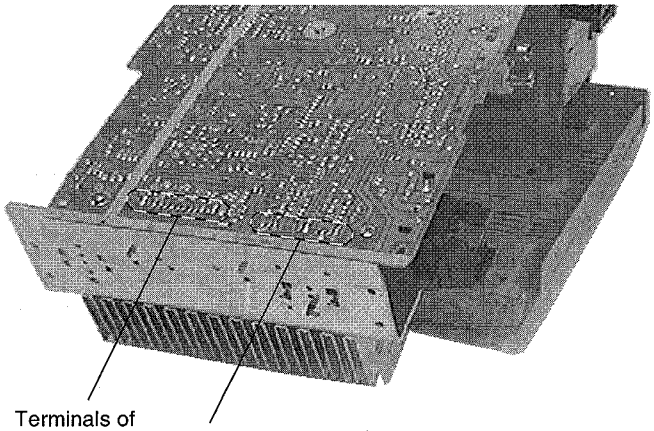




Step 3 Remove the connector CN300 and CN302 and remove the front cabinet in the direction of arrow ⓐ .

ⓐ





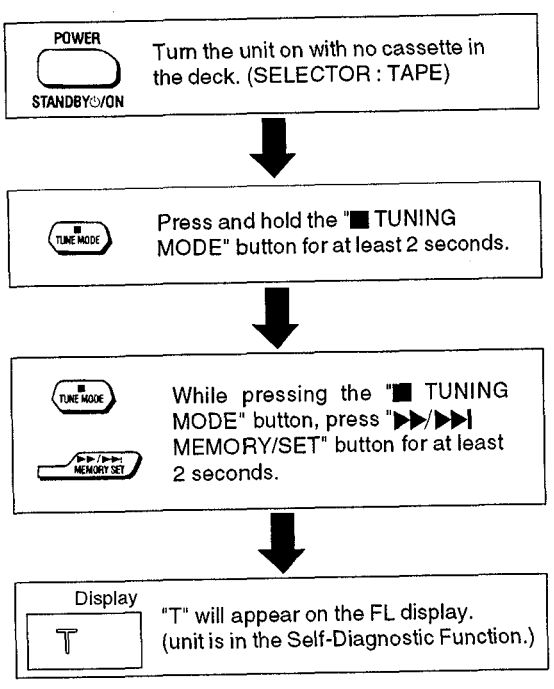
Step 6
Unsolder the terminals of Power IC or Regulator Transistors on the solder surface and replace them.

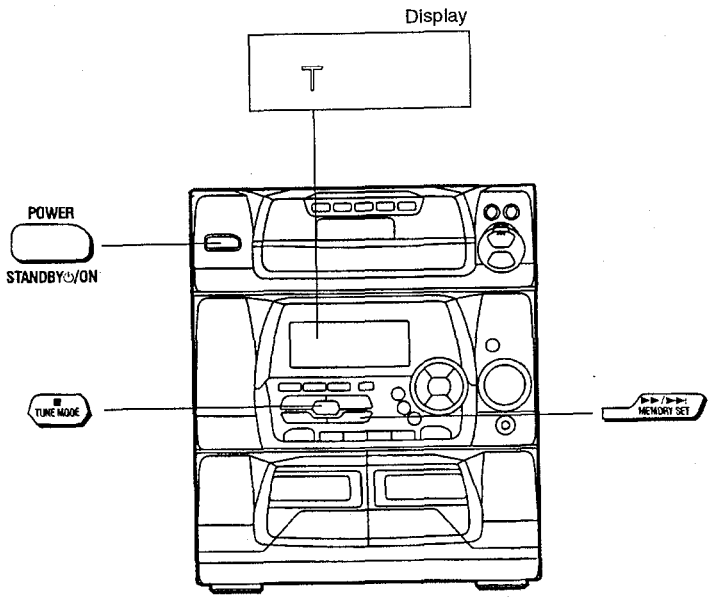
■ Self-Diagnostic Display Function

■ Self-diagnostic display

This unit is equipped with a self-diagnostic display function which, if a problem occurs, will display an error code corresponding to the problem. Use this function when performing maintenance on the unit.

■ How to enter the Self-Diagnostic Function


POWER
STANDBY⏻/ON
Turn the unit on with no cassette in the deck. (SELECTOR : TAPE)
TUNE MODE
Press and hold the "■ TUNING MODE" button for at least 2 seconds.
TUNE MODE
MEMORY SET
While pressing the "■ TUNING MODE" button, press "▶▶/▶▶I MEMORY/SET" button for at least 2 seconds.
Display
T
"T" will appear on the FL display. (unit is in the Self-Diagnostic Function.)



■ Cassette Mechanism Test (For error code H01, H02, H03, F01, F02)

1. Press "TAPE, DECK 1/2" to select Deck 2.
2. Load a cassette tape with the erasure prevention tab, remove from left side only and close the cassette holder.
3. Press "▶▶/▶▶I MEMORY/SET" (Tape will be stop after 2 seconds).
4. Load a cassette tape with the erasure prevention tab, remove from right side only and close the cassette holder.
5. Press "I◀◀/◀◀ FM MODE/BP" (Tape will be stop after 2 seconds).
6. Load a pre-recorded tape with both side record tabs intact and close the cassette holder.
7. Press "▶ TUNE/TIME ADJ∧" (After TPS function, tape will stop automatically).
8. Press "•REC/STOP" (Tape will not move).
9. Press "■ TUNING MODE" to indicate Error code.
   • If several problem exist, error code will change each time when "■ TUNING MODE" is pressed. (e.g. H01 = H03 = F01 ..... etc.)
10. Press "TAPE, DECK 1/2" to select Deck 1.
11. Repeat step 2 to 9 to test Deck 1. (Tape Deck 1 will not check H02 because of no recording function)

■ CD Mechanism Test (F15, F16, F25 ~ F28, F75)

1. Press "CD".
2. Press "OPEN -NEXT/–AUTO".
3. Press "■ TUNING MODE" to indicate Error Code.
   • If several problem exist, error code will change each time when "■ TUNING MODE" is pressed. (e.g. F15 = F16 = F25 ..... etc.)

■ To clear all Error code

1. Press "■ TUNING MODE" button for 5 seconds.
2. FL indicator shows "CLEAR" for 1 second and change to "T".

■ How to get out from Self-Diagnostic function

1. Press "POWER" button OFF.

■ Power Amplifier Failure (F61)

1. When power amplifier fail, F61 will indicate automatically.

■ Description of Error Code

(1) Error detection for Cassette Mechanism block

No.	Error	Error Display	Problem condition
1	MODE SW detection error	H01	Faulty operation of cassette mechanism. Faulty contact or short-circuit of mechanism mode switch (S951, S971).
2	REC INH SW detection error	H02	Recording not possible. Faulty contact or short-circuit of REC INH switch (S974, S975).
3	HALF SW detection error	H03	Playback can not perform. Faulty contact or short-circuit of HALF switch (S952, S972).
4	Reel Pulse detection error	F01	The tape advances slightly and then stops. Faulty reel pulse, faulty hole detect IC (IC951, IC971).
5	TPS abnormal	F02	Cassette deck will not perform TPS function. Faulty playback EQ/recording amplifier IC (IC101).

(2) Error detection for CD/Changer block

No.	Error	Error Display	Problem condition
1	REST SW detection error	F15	CD does not function. This error occurs when the Optical Pick Up REST SW (S701) is not detected within the specified time (about 8 seconds)
2	S3 (TUP) detection error	F16	CD does not function. This error occurs when S3 (Traverse up detection) is not ON or OFF within the specified time.
3	S4 (DRO) detection error	F25	Tray does not stay open. This error occurs when S4 (Tray open detection) is not ON or OFF during OPEN/CLOSE operation within the specified time.
4	Transmission error between CD servo LSI and micon	F26	CD does not function. This error occurs when the POWER is ON for the CD block and an error is detected after the transmission has started.
5	S5 (TNO) detection error	F27	Tray number does not detect correctly. This error occurs when S5 (Tray number detection) can not be detected normally or when the TRAY No. is uncertain.
6	S1 (STK), S2 (PLY) detection error	F28	CD loading mechanism does not move correctly. This error occurs when S1 (stocker position detection) is not ON or OFF, or S2 (play position detection) is not ON or OFF within the specified time.
7	CD power error	F75	CD does not function. Check if CDRST is H for SELECTOR at CD. If it is not H after 1 second, it shall be memorised as an error. (IC702)

(3) Power Supply related error detection

No.	Error	Error Display	Problem condition
1	POWER AMP output abnormal	F61	When POWER is switched on, power become off automatically. During normal operation, if DC DET become L, PCNT shall become L and the error display on the left shall be displayed. (IC501)

■ CD Test Mode Function

This CD test mode is provided to check CD unit without connecting to changer loading mechanism. This mode shall operate CD PLAY with CD unit
being connected only and CD Automatic Alignment result is shown on FL display.

■ How to set CD test mode

Prepare and set up the CD unit
checking condition (Refer to page 7)

CD Press CD

TUNE MODE Press and hold the "■ TUNING MODE" button at least 2 seconds.

TUNE MODE + MEMORY SET While pressing the "■ TUNING MODE" button, press "▶▶/▶▶| MEMORY/SET" button for at least 2 seconds.

Display
CD E00
Automatic Alignment result appear on the FL display.

■ CD Automatic Alignment result indication

This function provided indication of error code as the result of Automatic Alignment of CD (Tracking, Focus, Offset, etc.).
Based on these error codes, the faulty area can be located .

■ Error code Explanation

- The unit is satisfactory if the error code is E00
- Before testing, make sure that the test disc is free of scratches, dirt and that the optical pick up lens is clean.

Error code	E00	E01	E02	E03	E04	E05	E06	E07	E08	E09	E0A	E0B	E0C	E0D	E0E	E0F
Focus offset	O	※	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Tracking offset	O	※	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Focus Gain (Rough)	O	※	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Tracking Gain(Rough)	O	–	O	X	O	X	O	X	O	X	O	X	O	X	O	X
Tracking balance	O	–	X	X	O	O	X	X	O	O	X	X	O	O	X	X
Focus balance	O	–	O	O	X	X	X	X	O	O	O	O	X	X	X	X
Tracking or Focus Gain (Fine)	O	–	O	O	O	O	O	O	X	X	X	X	X	X	X	X

O Satisfy X Fault (※ Fault either items)

■ Measurements and Adjustments

< CASSETTE DECK SECTION >

- Measurement Condition
  - Reverse-mode selector switch : ⇄
  - Tape edit : NORMAL
  - Record timer : OFF
  - Dolby NR : OFF
  - Make sure head, capstan and pressure roller are clean.
  - Judgeable room temperature 20 ± 5 °C (68 ± 9 °F)
- Measuring instrument
  - EVM (Electronic Voltmeter)
  - Digital frequency counter
- Test tape
  - Head azimuth adjustment (8 kHz, –20 dB); QZZCFM
  - Tape speed adjustment (3 kHz, –10 dB); QZZCWAT
  - Playback gain adjustment (315 Hz, 0 dB); QZZCFM
  - Normal reference blank tape; QZZCRA
  - CrO_2 tape; QZZCRX

• Head Azimuth Adjustment (Deck 1/2)

Caution :

- Please replace both azimuth adjustment screws (RHE5152ZB) and springs (RMB0331) simultaneously when readjusting the head azimuth. (shown in Fig. 2)
  Even if you wish to readjust the head azimuth without replacing the screws and springs, a fine adjustment cannot be done because of the screw-locking bond adhered to the azimuth screw and spring.
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (shown in Fig. 3)

1. Playback the azimuth adjustment portion (8 kHz, –20 dB) of the test tape (QZZCFM) in the forward play mode. Vary the azimuth adjusting screw until the output of the R-CH (PB OUT-R) are maximized.
2. Perform the same adjustment in the reverse play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

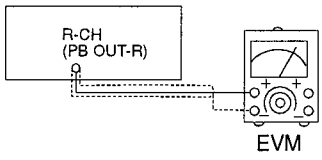


Fig. 1

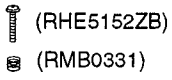


Fig.2

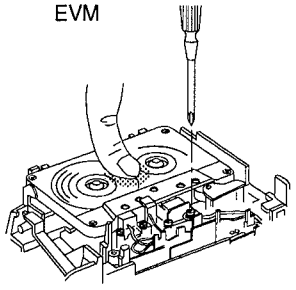


Fig. 3

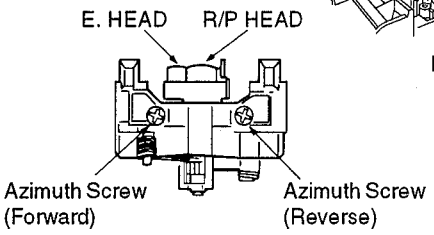
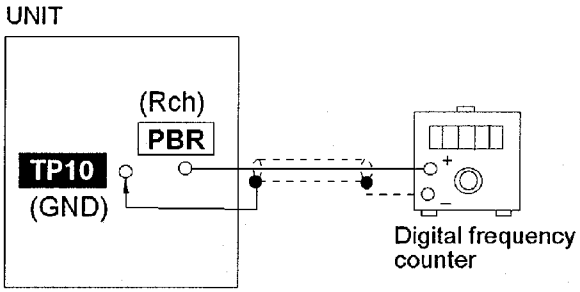


Fig. 4

• Tape Speed Adjustment (Deck 1/2)

1. Set the tape edit button to "NORMAL" position.
2. Insert the test tape (QZZCWAT) to DECK 2 and playback (FWD side) the middle portion of it.
3. Adjust VR201 (DECK 2) for the output value shown below.

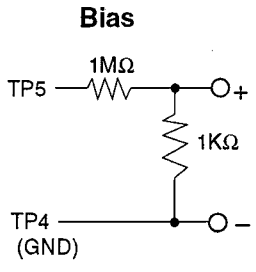
   Adjustment target : 2955 ~ 3045 Hz (NORMAL speed)
4. After alignment, assure that the output frequency of the DECK 2 REV and DECK 1 FWD/REV are within ± **60 Hz** of the value of the output frequency of DECK 2 FWD.

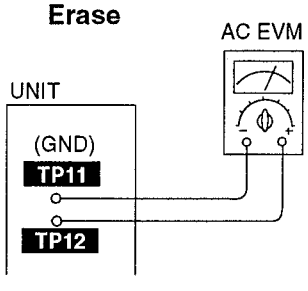


• Bias and Erase Voltage Check

1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to "REC" mode (use "•REC / STOP" key).
3. Measure and make sure that the output is within the standard value.
4. Insert the CrO_2 tape (QZZCRX).
5. Repeat steps 2 and 3.

Bias voltage for Deck 2 (Standard value) : 19 ± 4mV (Normal)
27 ± 5mV (CrO_2)
Erase voltage for Deck 2 (Standard value) : more than 100mV (Normal)
more than 150mV (CrO_2)

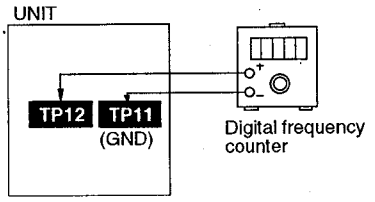




• Bias Frequency Adjustment (Deck 2)

1. Set the unit to "AUX" position.
2. Insert the Normal blank tape (QZZCRA) into DECK 2 and set the unit to "REC" mode (use "•REC / STOP" key).
3. Adjust L201 so that the output frequency is within the standard value.

Standard Value : 98 ± 8 kHz



< TUNER SECTION >

• AM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown IN Fig. 3)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	450 kHz 30 % Mod. at 400 Hz	Point of non-interference.(on/ about 600kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	Z2(AM IFT)	Adjust for maximum output.

• AM-RF ALIGNMENT(EG)

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 3)	REMARKS
CONNECTIONS	FREQUENCY				
"	522 kHz	Tuning capacitor fully closed.	"	Z1-1 (AM OSC Coil)	Adjust for maximum output.
"	1629 kHz	Tuning capacitor fully opened.	"	Z1-2 (AM OSC Trimmer)	Adjust for maximum output.
"	603 kHz	Tune to signal	"	Z1-2 (AM ANT Coil)	Adjust for maximum output.
"	1404 kHz	"	"	Z1-2 (AM ANT Trimmer)	Adjust for maximum output.

• Alignment Points

<Cassette Deck Section>

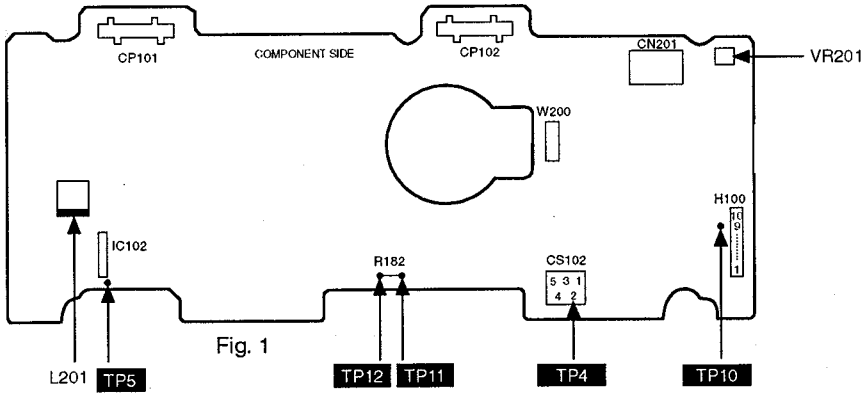


Fig. 1

To Headphone

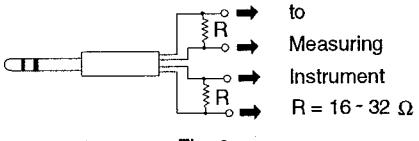


Fig. 2

<Tuner Section>

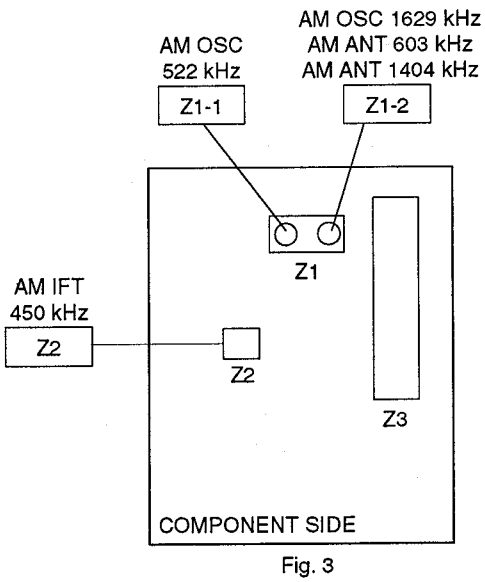


Fig. 3

■ Terminal Function of ICs

• IC701 (AN8835SBE1) Servo Amplifier

Pin No.	Mark	I/O	Function
1	PDA	I	PD signal input
2	PDB	I	PD signal input
3	VCC	I	Power supply connection
4	LPD	I	Laser PD connection
5	LD	O	Power out for LD driving
6	RF	O	RF signal output
7	RFIN	I	RF signal input
8	CAGC	I	AGC loop filter connection
9	ARF	O	RF-AGC output
10	CSBRT	I	Capacitor for detection connection
11	CEA	I	Capacitor connection for HPF amplifier
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	LD APC input ("H" : ON, "L" : OFF)
14	GND	—	Ground connection

Pin No.	Mark	I/O	Function
15	/RFDET	O	NRFDET output ("L" : detection)
16	CROSS	O	CROSS output (Track cross signal output)
17	OFTR	O	Off-track output("L" : ON track, "H" : OFF track)
18	VDET	O	VDET output("H" : Vibration detected)
19	ENV	O	RF envelope detection
20	TEBPF	I	Vibration detection signal input
21	CCRS	I	Capacitor for LPF connection
22	TE	O	Tracking error signal output
23	FE	O	Focus error signal output
24	TBAL	I	Tracking balance signal input
25	FBAL	I	Focus balance signal input
26	VREF	O	Reference voltage output
27	PDE	I	PD signal input
28	PDF	I	PD signal input

• IC703 (AN8389SE1) Focus coil / Tracking coil / Traverse motor / Spindle motor driver

Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Reference voltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	Ground connection
6	NC	—	Ground connection
7	NRESET	I	Reset input
8	GND	—	Ground connection
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power cut) input
11	IN1	I	Motor driver (1) input
12	PC1	I	PC1 (power cut) input (Not used, open)

Pin No.	Mark	I/O	Function
13	PVCC1	I	Power supply (1) for driver
14	PGND1	—	Ground connection (1) for driver
15	D1–	O	Motor driver (1) reverse-action output
16	D1+	O	Motor driver (1) forward-action output
17	D2–	O	Motor driver (2) reverse-action output
18	D2+	O	Motor driver (2) forward-action output
19	D3–	O	Motor driver (3) reverse-action output
20	D3+	O	Motor driver (3) forward-action output
21	D4–	O	Motor driver (4) reverse-action output
22	D4+	O	Motor driver (4) forward-action output
23	PGND2	—	Ground connection (2) for driver
24	PVCC2	I	Power supply (2) for driver

• IC702 (MN662741RPA) Servo processor / Digital signal processor / Digital filter / D/A converter

Pin No.	Mark	I/O	Function
1	BCLK	O	Serial bit clock terminal (Not used, open)
2	LRCK	O	L/R discriminating signal (Not used, open)
3	SRDATA	O	Serial data (Not used, open)
4	DVDD1	I	Power supply (digital circuit) terminal
5	DVSS1	—	GND (digital circuit) terminal
6	TX	O	Digital audio interface signal
7	MCLK	I	Microprocessor command clock signal
8	MDATA	I	Microprocessor command data signal
9	MLD	I	Microprocessor command load signal
10	SENSE	O	Sense signal output
			(OFT,FESL,MAGEND,NAJEND,POSAD,SFG)
11	/FLOCK	O	Optical servo condition(focus)("L" : lead-in)
12	/TLOCK	O	Optical servo condition(tracking)("L" : lead-in)
13	BLKCK	O	Sub-code block clock (f=75Hz)
14	SQCK	I	External clock signal input for sub-code Q
			register.
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H" : mute)
17	STAT	O	Status signal output
			(CRC,CUE,CLVS,TTSTVP,FCLV,SQCK)
18	/RST	I	Reset input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at
			MSEL = "H" (fSMCK=8.4672MHz)
			1/4-divided clock signal of crystal oscillating at
			MSEL="L" (fSMCK=4.2336MHz)
20	PMCK	O	1/192-divided clock signal of crystal oscillating
			(fPMCK=88.2kHz) (Not used, open)
21	TRV	O	Traverse servo control output
22	TVD	O	Traverse drive signal output
23	PC	O	Spindle motor ON signal output ("L" : ON)
24	ECM	O	Spindle motor drive signal output
			(forced mode output)
25	ECS	O	Spindle motor drive signal output
			(servo error signal output)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD,ECS,TRD,FOD,
			FBAL,TBAL) Reference voltage input.
30	FBAL	O	Focus balance adjustment output
			(Not used,open)
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H" : detection)

Pin No.	Mark	I/O	Function
36	OFT	I	Off-track signal input ("H" : off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L" : detection)
39	BDO	I	Dropout signal input ("H" : Dropout)
40	LDON	O	Laser on signal output ("H" : ON)
41	TES	O	Tracking error shunt signal output ("H" : shunt)
42	PLAY	O	Play signal out ("H" : PLAY)
43	WVEL	O	Double speed status signal output ("H" : DS)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias (Not used, open)
47	DSLF	I/O	DSL loop filter
48	PLLF	I/O	PLL loop filter
49	VCOF	I/O	VCO loop filter (Not used, open)
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	—	GND (for analog circuit)
52	EFM	O	EFM signal output (Not used, open)
53	PCK	O	PLL extraction clock ouput (Not used, open)
			(fPCK=4.321 MHz during normal playback)
54	PDO	O	Phase comparison signal of EFM and PCK signals
			(Not used, open)
55	SUBC	O	Sub-code serial data output (Not used, open)
56	SBCK	I	Sub-code frame clock signal output
			(fCLDCK=7.35kHz during normal playback)
57	VSS	—	GND
58	X1	I	Crystal oscillating circuit input (f=16.9344MHz)
59	X2	O	Crystal oscillating circuit output (f=16.9344MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	O	Byte clock output (Not used, open)
62	/CLDCK	O	Clock input for sub-code serial data
			(Not used, open)
63	FCLK	O	Crystal frame clock signal output
			(fCLK=7.35kHz, double=14.7kHz)
64	PFLAG	O	Interpolation flag output ("H" : interpolation)
			(Not used, open)
65	FLAG	O	Flag output (Not used, open)
66	CLVS	O	Spindle servo phase synchronizing signal output
			("H" : CLV, "L" : rough servo) (Not used, open)
67	CRC	O	Sub-code CRC checked output
			("H" : OK, "L" : NG) (Not used, open)
68	DEMPH	O	De-emphasis ON signal output
			("H" : ON) (Not used, open)
69	RESY	O	Frame resynchronizing signal output
			(Not used, open)
70	/RST2	I	Reset input through MASH circuit ("L" : Reset)
71	/TEST	I	Test input

Pin No.	Mark	I/O	Function
72	AVDD1	I	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output
74	AVSS1	—	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input
			(at "H" level, RSEL="H", at "L" level, RESL="L")
77	CSEL	I	Crystal oscillating frequency designation input

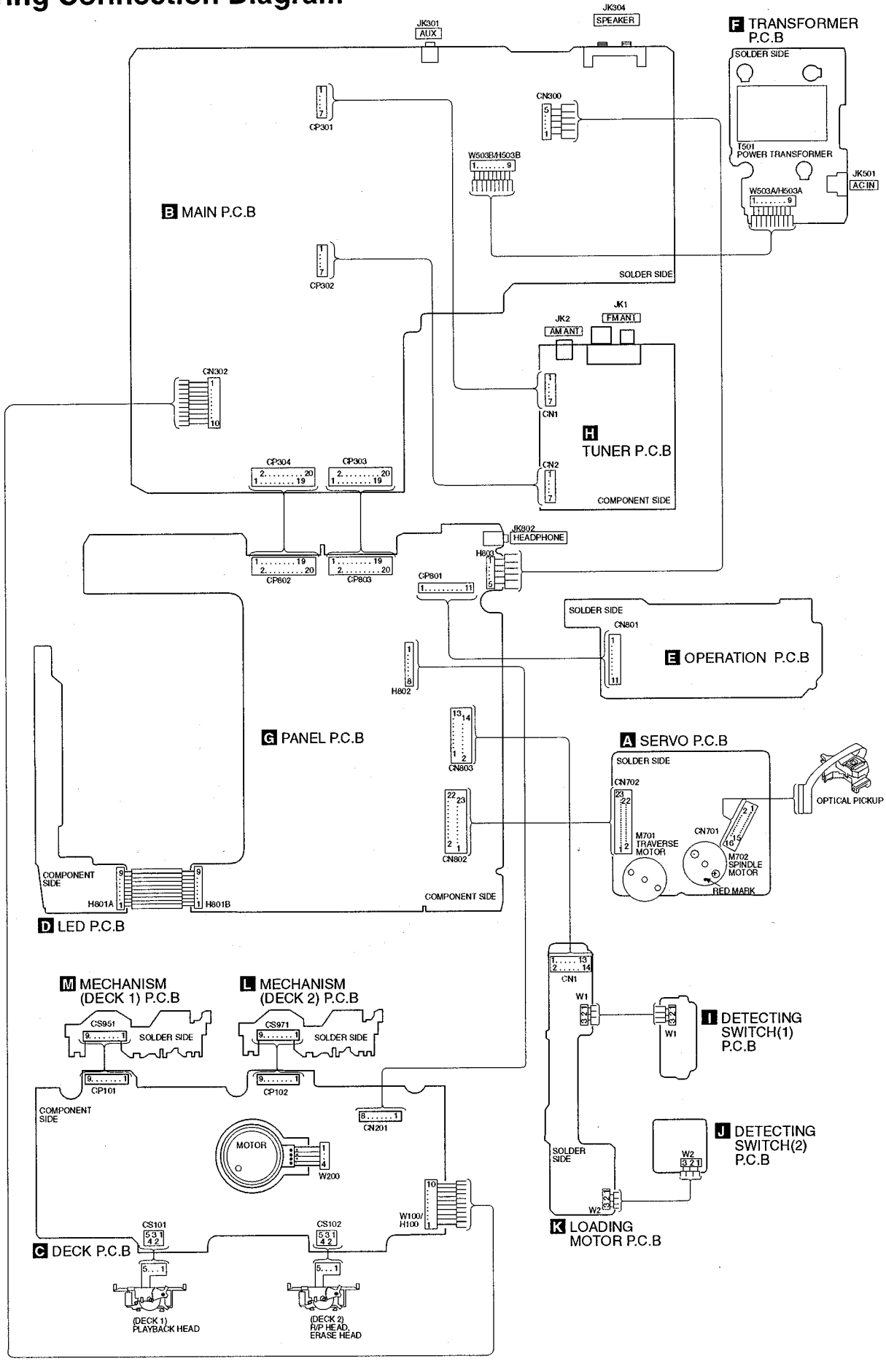
Pin No.	Mark	I/O	Function
			"L" : 16.9344MHz "H" : 33.8688MHz
78	PSEL	I	Test input (normally "L") (Not used, open)
79	MSEL	I	Output mode switching of SUBQ terminal
			("H" : Q code buffer mode)
80	SSEL	I	Output frequency switching for SMCK terminal
			"H" : SMCK=8.4672MHz
			"L" : MCK=4.2336MHz (Not used, open)

• IC803 (M38197MA194F) System Microprocessor

Pin No.	Mark	I/O	Function
1	DECK 2	I	Mecha condition input(PLAY, FF/RW, MOTOR)
2	DECK 1	I	Mecha condition input(PLAY, FF/RW, MOTOR)
3	TPS_IN	I	TPS input
4	CRT	—	CR timer
5	KEY 4	I	Key 4 input
6	KEY 3	I	Key 3 input
7	KEY 2	I	Key 2 input
8	KEY 1	I	Key 1 input
9	SER 1	O	LED drive clock output
10	MDATA/ PLLDATA	O	CD command data output
11	SER 2	O	LED drive data output
12	SER 3	O	LED drive data output
13	SER 4	O	Key control clock output
14	SER 5	O	Key control strobe output
15	SPEANA INPUT	I	Spectrum analyser input
16	CHG SW1	I	CD changer SW input (STK_SW, TUP_SW)
17	CHG SW2	I	CD changer SW input (DR0_SW, PLY_SW, TN0_SW)
18	CDRST	I	CD reset input
19	STATUS	I	CD signal processor status input
20	SQCK	O	CD subcode clock output
21	NC	—	No connection
22	SUBQ	I	CD subcode data input
23	TLOCK	I	CD tracking lock input
24	FLOCK	I	CD focus lock input
25	SENSE	I	CD servo processor sense input
26	MLD/ PLLCE	O	CD command load output
27	NC	—	No connection
28	MCLK/ PLLCLK	O	CD command clock output
29	RESTSW	I	CD REST detect SW input

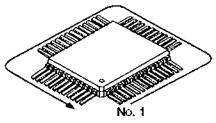
Pin No.	Mark	I/O	Function
30	BLKCK	I	CD block clock input
31	RMT	I	Remote control signal input
32	DCDET	I	DC detect input
33	P.CONT	O	Power control output
34	/HALT	I	AC failure detect input
35	/RESET	I	RESET input
36	XCIN	I	X'tal oscillator (f = 32.768 kHz sub clock)
37	XCOUT	O	X'tal oscillator (f = 32.768 kHz sub clock)
38	XIN	I	X'tal oscillator (f = 6.0 MHz Main clock)
39	XOUT	O	X'tal oscillator (f = 6.0 MHz Main clock)
40	VSS	—	Ground (0V)
41	MBP1	O	MPU beat proof output 1
42	MBP2	O	MPU beat proof output 2
43	CDGMUTE	—	No connection
44	/CDGRESET	—	No connection
45	CD DMUTE	O	CD digital mute output
46	SPE CONT A	O	Space control A
47	SPE CONT B	O	Space control B
48	SPE CONT C	O	Space control C
49-64	GRD16-GRD1	O	FL digit (grid) drive signal output
65-88	AND1-AND24	O	FL segment (anode) drive output
89	JOG A	I	Jog dial signal input A
90	JOG B	I	Jog dial signal input B
91	VCC	I	Power supply (+5V)
92	REGION IN	I	Area setting terminal
93	MKCLK	O	Cassette deck control clock signal output
94	MKDATA	O	Cassette deck control data output
95	SD IN	I	Tuner signal DET input
96	STEREO IN	I	Tuner stereo DET input
97	DO IN	I	Tuner PLL if data input
98	VP	I	Power input (-30V)
99	VSS	—	Ground (0V)
100	VREF	I	Reference for A-D

■ Wiring Connection Diagram



■ Terminal Guide of ICs, Transistors and Diodes

M38197MA194F(100P)
MN662741RPA(80P)



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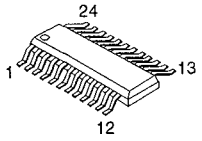

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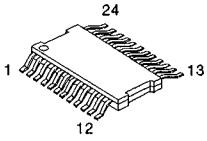

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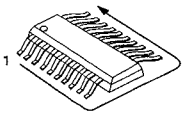
BU2090F-E2 (16P)
BU4052BCF-E2 (16P)
M51167BFP-TB (36P)
BH3854AFS-E2 (32P)
CXA1102M-T4 (16P)
BU4066BCF-E2 (14P)



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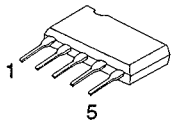

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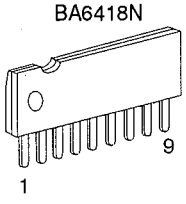

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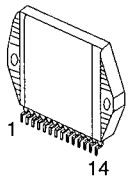

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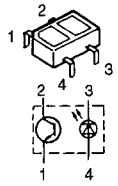

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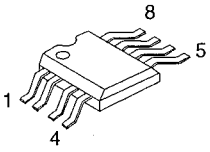

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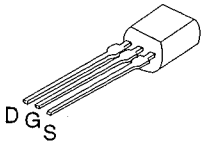

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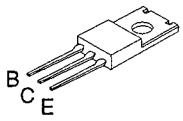

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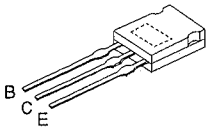

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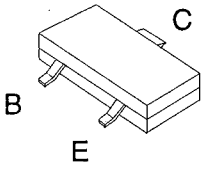

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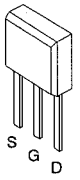

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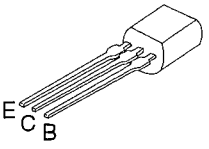

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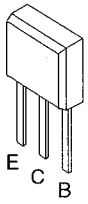

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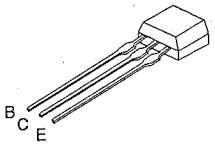

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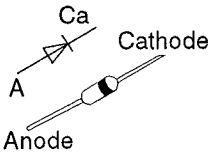

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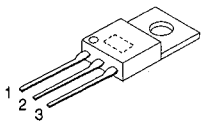

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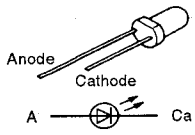

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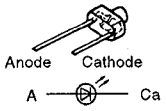

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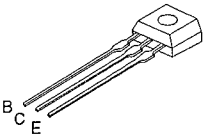

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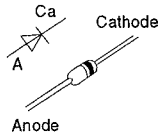

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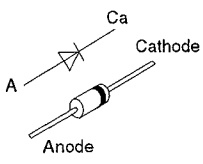

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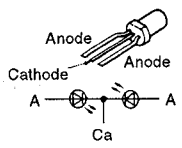

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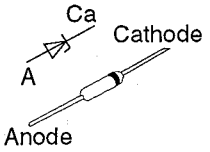
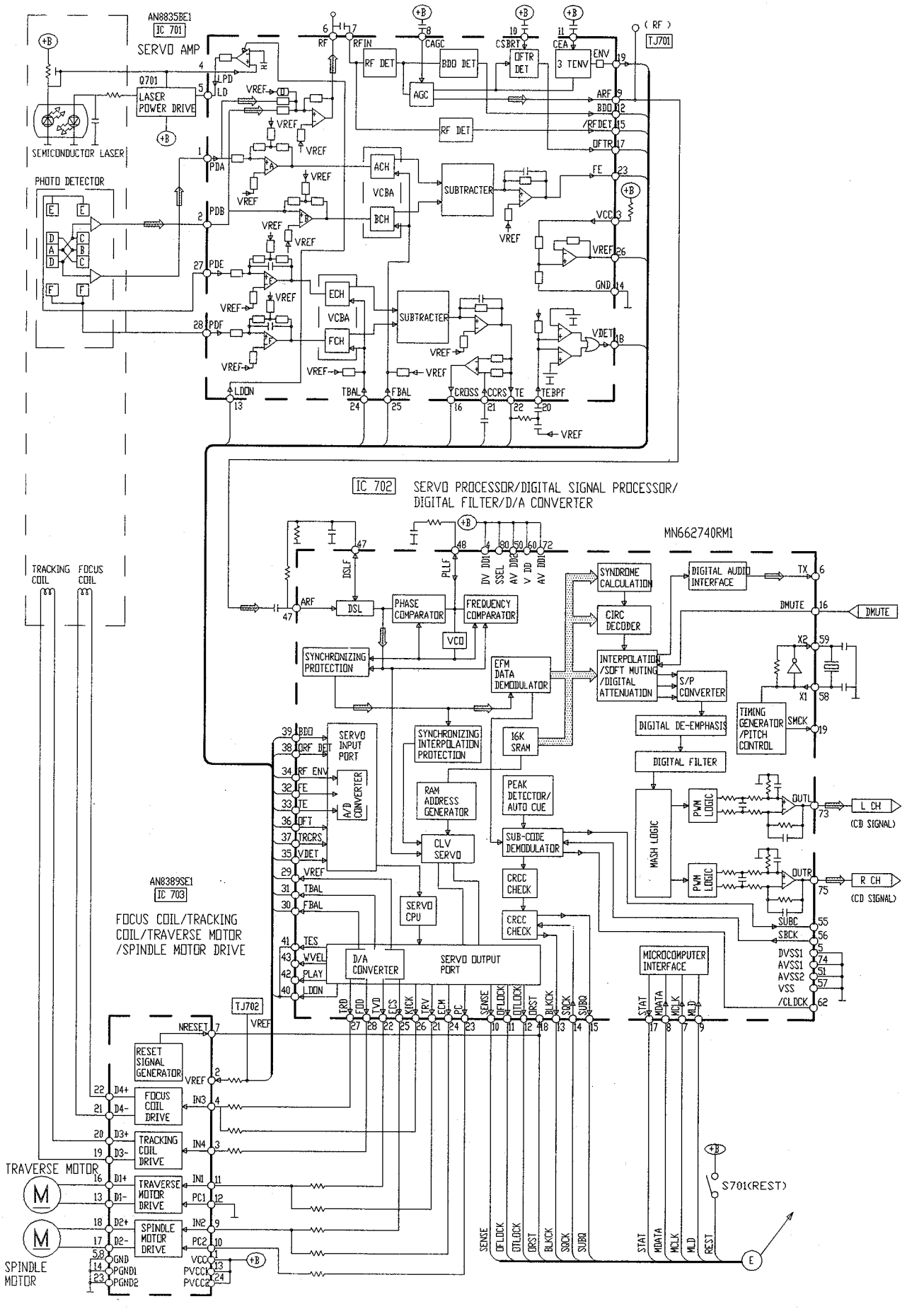
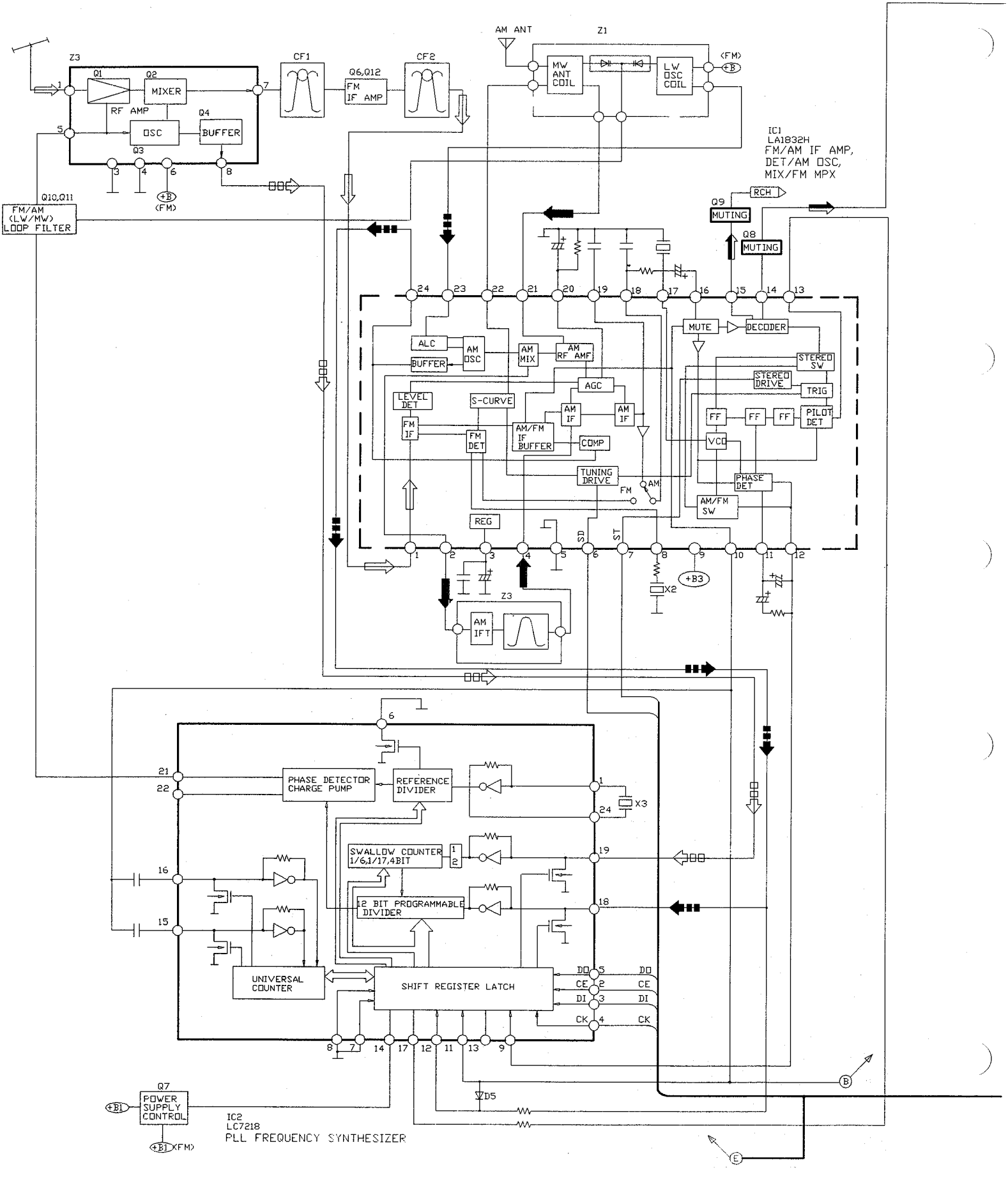
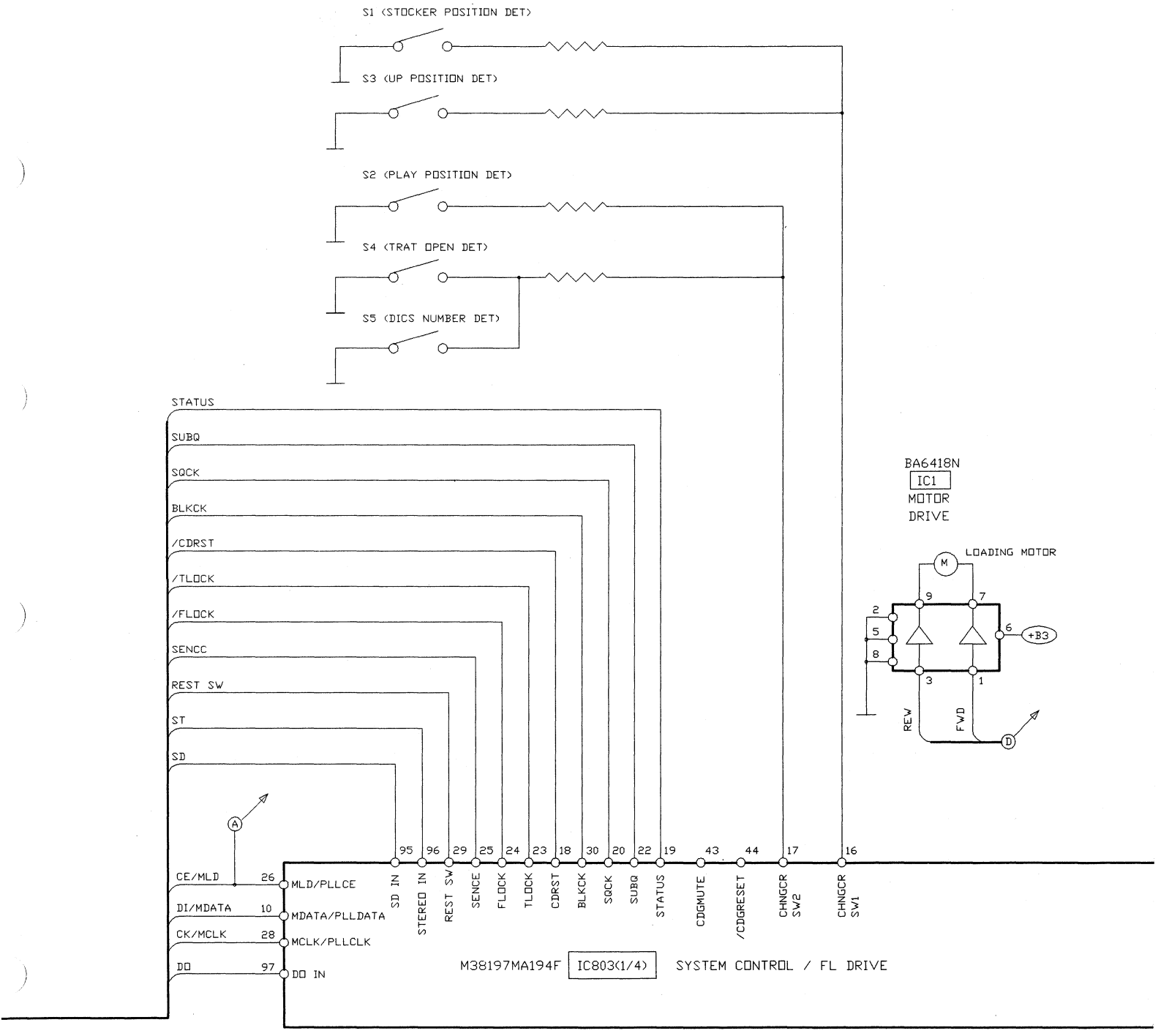
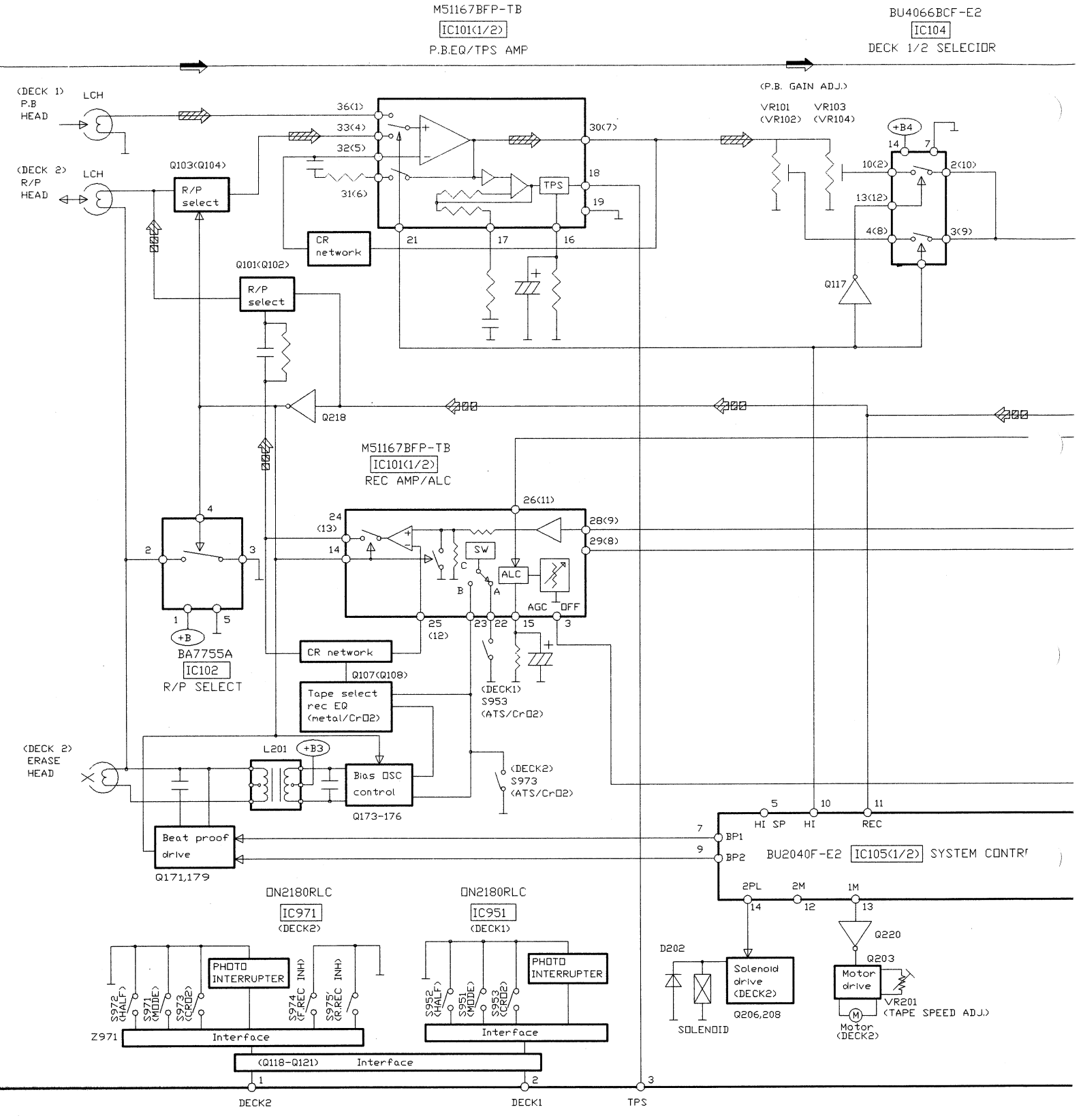


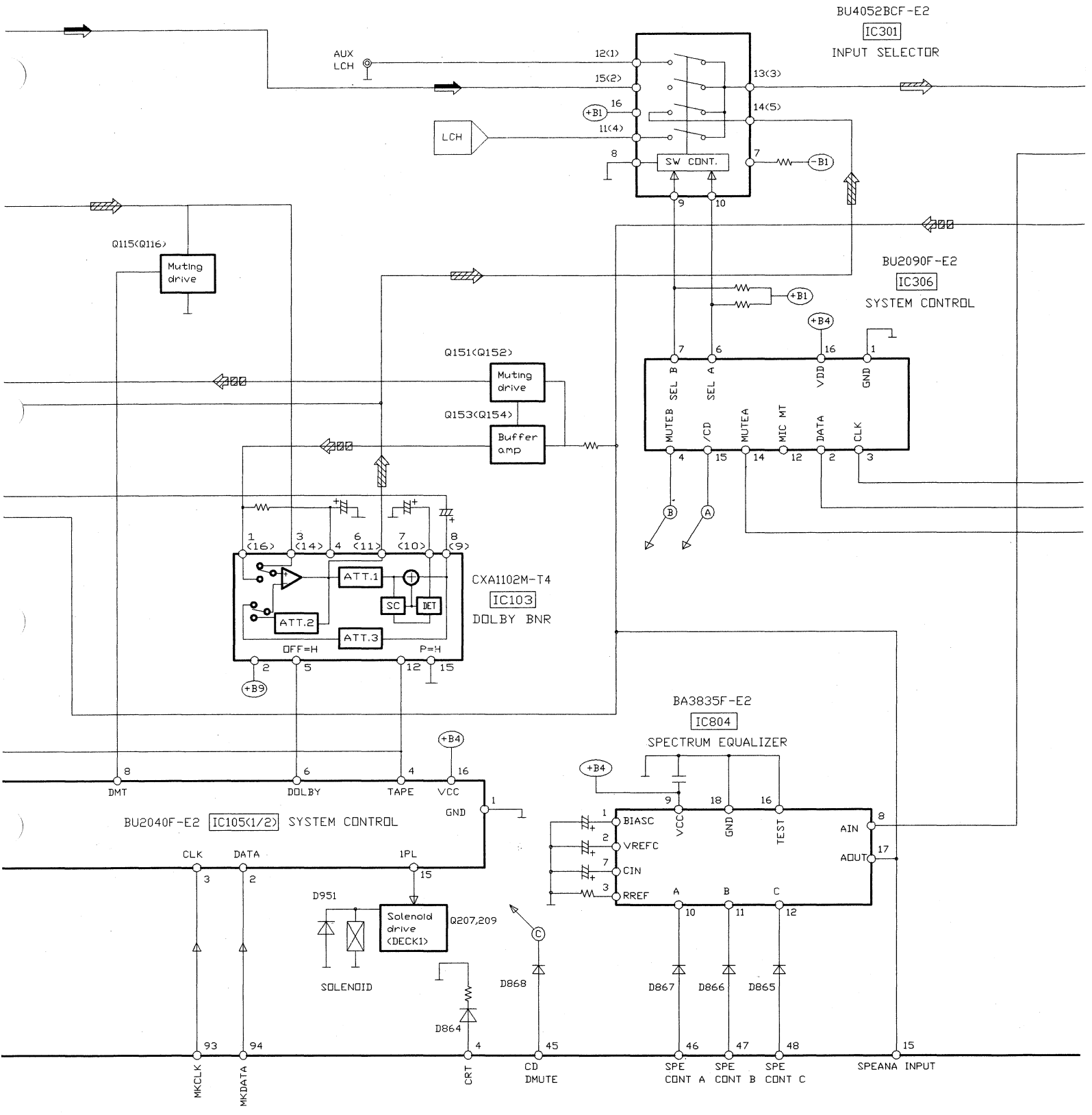
■ Block Diagram

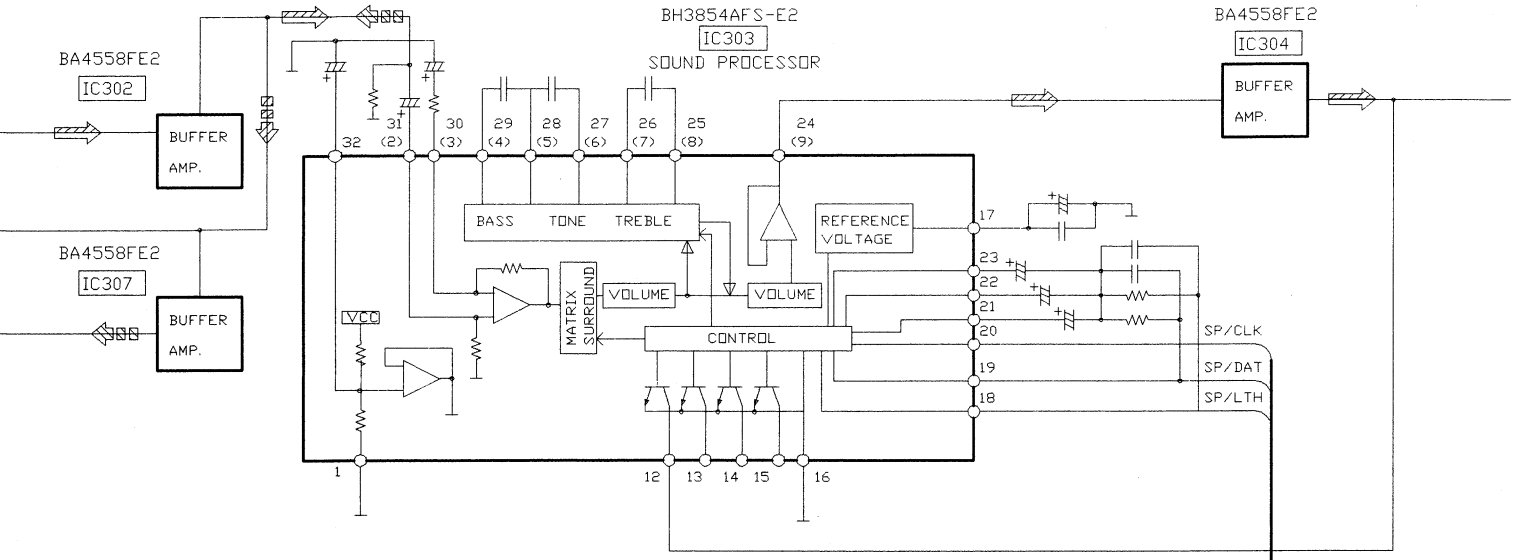


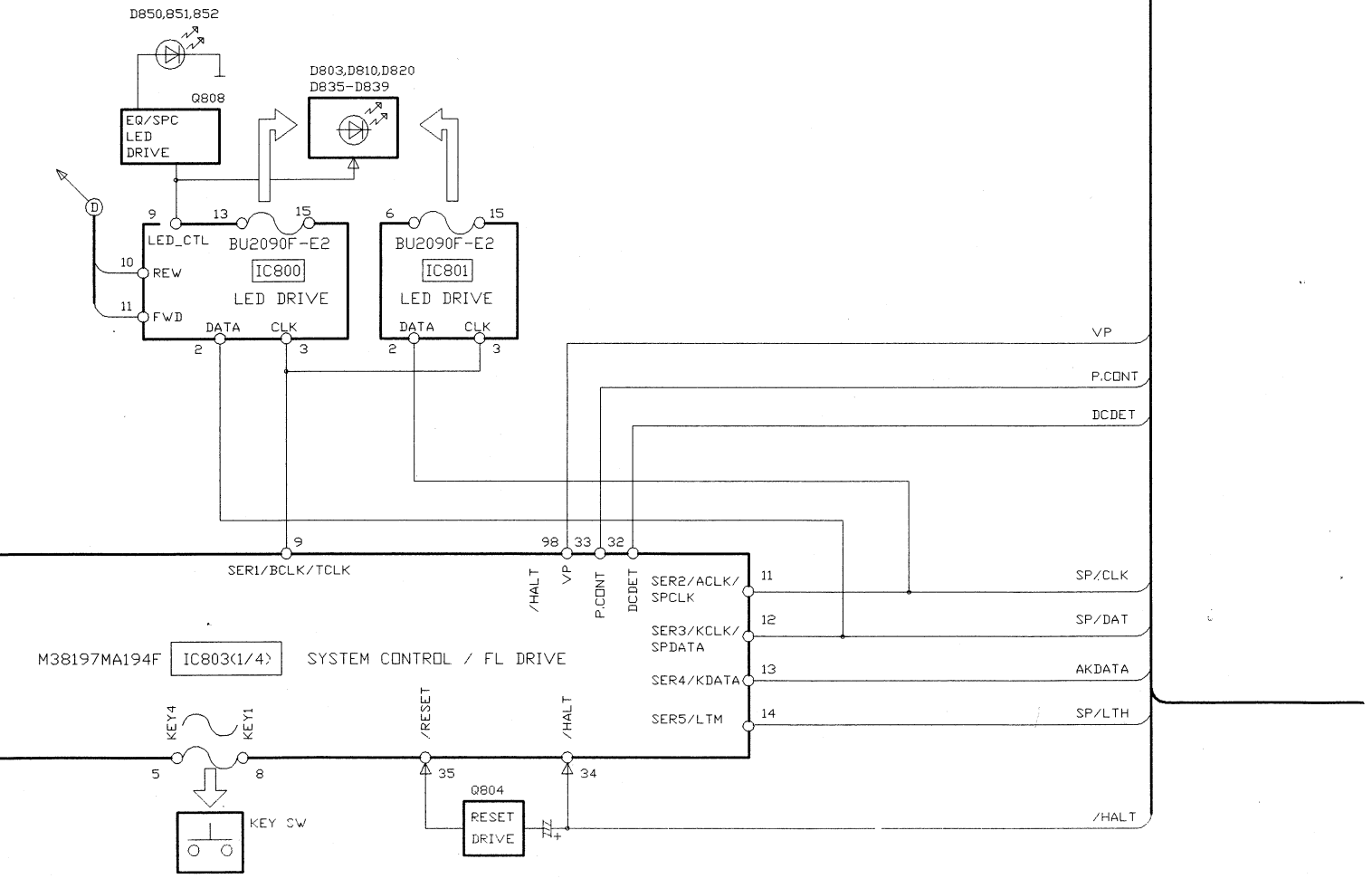

AM ANT
Z1
MW ANT COIL
LW OSC COIL
(FM)
+B
Z3
Q1
Q2
MIXER
RF AMP
OSC
Q4
BUFFER
Q3
CF1
Q6,Q12
FM IF AMP
CF2
IC1
LA1832H
FM/AM IF AMP,
DET/AM OSC,
MIX/FM MPX
Q10,Q11
FM/AM (LW/MW) LOOP FILTER
RCH
Q9
MUTING
Q8
MUTING
ALC
AM OSC
BUFFER
AM MIX
AM RF AMP
MUTE
DECODER
STEREO SW
STEREO DRIVE
TRIG
AGC
LEVEL DET
S-CURVE
AM IF
FM IF
FM DET
AM/FM IF BUFFER
COMP
FF
PILOT DET
VCO
TUNING DRIVE
PHASE DET
AM/FM SW
REG
SD
ST
X2
+B3
Z3
AM IFT
PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
X3
SWALLOW COUNTER 1/6,1/17,4BIT
12 BIT PROGRAMMABLE DIVIDER
UNIVERSAL COUNTER
SHIFT REGISTER LATCH
DO
CE
DI
CK
Q7
POWER SUPPLY CONTROL
+B1
D5
IC2
LC7218
PLL FREQUENCY SYNTHESIZER

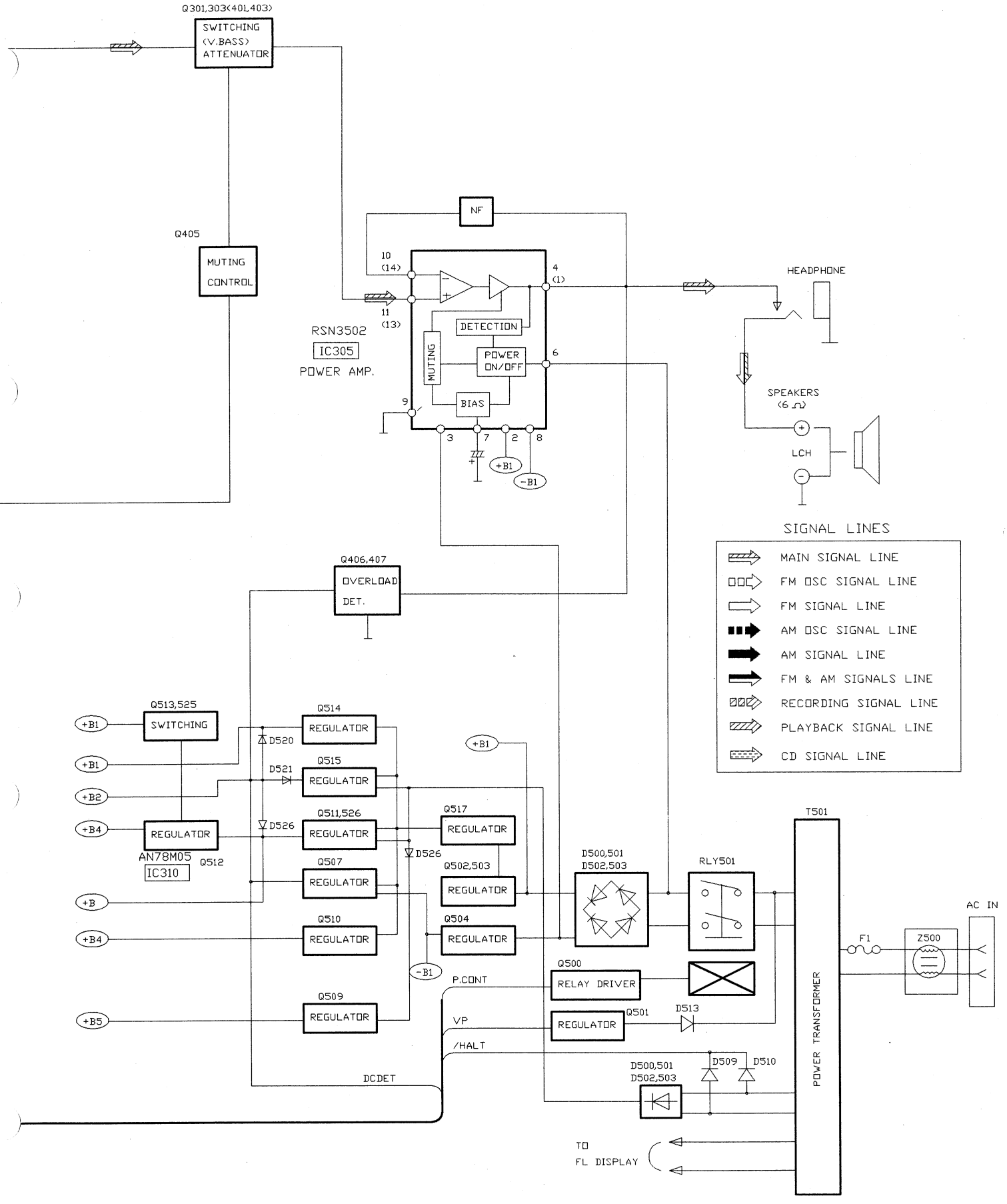

S1 (STOCKER POSITION DET)
S3 (UP POSITION DET)
S2 (PLAY POSITION DET)
S4 (TRAT OPEN DET)
S5 (DICS NUMBER DET)
STATUS
SUBQ
SQCK
BLKCK
/CDRST
/TLOCK
/FLOCK
SENCC
REST SW
ST
SD
BA6418N
IC1
MOTOR
DRIVE
LOADING MOTOR
M
+B3
REW
FWD
CE/MLD 26 MLD/PLLCE
DI/MDATA 10 MDATA/PLLDATA
CK/MCLK 28 MCLK/PLLCLK
DO 97 DO IN
95 SD IN
96 STEREO IN
29 REST SW
25 SENCE
24 FLOCK
23 TLOCK
18 CDRST
30 BLKCK
20 SQCK
22 SUBQ
19 STATUS
43 CDGMUTE
44 /CDGRESET
17 CHNGCR SW2
16 CHNGCR SW1
M38197MA194F
IC803(1/4)
SYSTEM CONTROL / FL DRIVE


M51167BFP-TB
IC101(1/2)
P.B.EQ/TPS AMP
BU4066BCF-E2
IC104
DECK 1/2 SELECIOR
(DECK 1) P.B HEAD
LCH
(DECK 2) R/P HEAD
LCH
Q103(Q104)
R/P select
Q101(Q102)
R/P select
CR network
TPS
(P.B. GAIN ADJ.)
VR101 (VR102)
VR103 (VR104)
+B4
Q117
Q218
M51167BFP-TB
IC101(1/2)
REC AMP/ALC
SW
ALC
AGC
OFF
BA7755A
IC102
R/P SELECT
CR network
Q107(Q108)
Tape select rec EQ (metal/CrO2)
(DECK1) S953 (ATS/CrO2)
(DECK 2) ERASE HEAD
L201
+B3
Bias OSC control
Q173-176
(DECK2) S973 (ATS/CrO2)
Beat proof drive
Q171,179
HI SP
HI
REC
BP1
BP2
BU2040F-E2
IC105(1/2)
SYSTEM CONTR
2PL
2M
1M
Q220
Q203
D202
Solenoid drive (DECK2)
Q206,208
SOLENOID
Motor drive
VR201 (TAPE SPEED ADJ.)
Motor (DECK2)
DN2180RLC
IC971
(DECK2)
DN2180RLC
IC951
(DECK1)
PHOTO INTERRUPTER
PHOTO INTERRUPTER
S972 (HALF)
S971 (MODE)
S973 (CRO2)
S974 (F.REC INH)
S975 (R.REC INH)
S952 (HALF)
S951 (MODE)
S953 (CRO2)
Z971
Interface
Interface
(Q118-Q121) Interface
DECK2
DECK1
TPS
M38197MA194F
IC803(1/4)
SYSTEM CONTROL / FL DRIVE
RMT
VCC
VREF
VSS
JOGA
JOGB
Z801 REMOTE SENSOR
D601
VR802 (VOLUMN/PULSE ENCODER)


BU4052BCF-E2
IC301
INPUT SELECTOR
AUX LCH
LCH
SW CONT.
+B1
-B1
Q115(Q116)
Muting drive
BU2090F-E2
IC306
SYSTEM CONTROL
+B4
Q151(Q152)
Muting drive
Q153(Q154)
Buffer amp
SEL B
SEL A
VDD
GND
MUTEB
/CD
MUTEA
MIC MT
DATA
CLK
CXA1102M-T4
IC103
DOLBY BNR
ATT.1
ATT.2
ATT.3
SC
DET
OFF=H
P=H
+B9
BA3835F-E2
IC804
SPECTRUM EQUALIZER
BIASC
VREFC
CIN
RREF
VCC
GND
TEST
AIN
ADUT
A
B
C
D867
D866
D865
D868
D864
D951
SOLENOID
Solenoid drive (DECK1)
Q207,209
DMT
DOLBY
TAPE
VCC
GND
BU2040F-E2
IC105(1/2)
SYSTEM CONTROL
CLK
DATA
1PL
MKCLK
MKDATA
CRT
CD DMUTE
SPE CONT A
SPE CONT B
SPE CONT C
SPEANA INPUT
M38197MA194F
IC803(1/4)
SYSTEM CONTROL / FL DRIVE
MBP2
MBP1
XOUT
XIN
XCOUT
XCIN
X'TAL CONTROL
Q806,807
X802(6MHz)
X801(32.7KHz)
GRID16
GRID1
AND1
AND24
Q800,803
POWER SUPPLY FOR FL800
FL DISPLAY FL800
FROM POWER TRANSFORMER

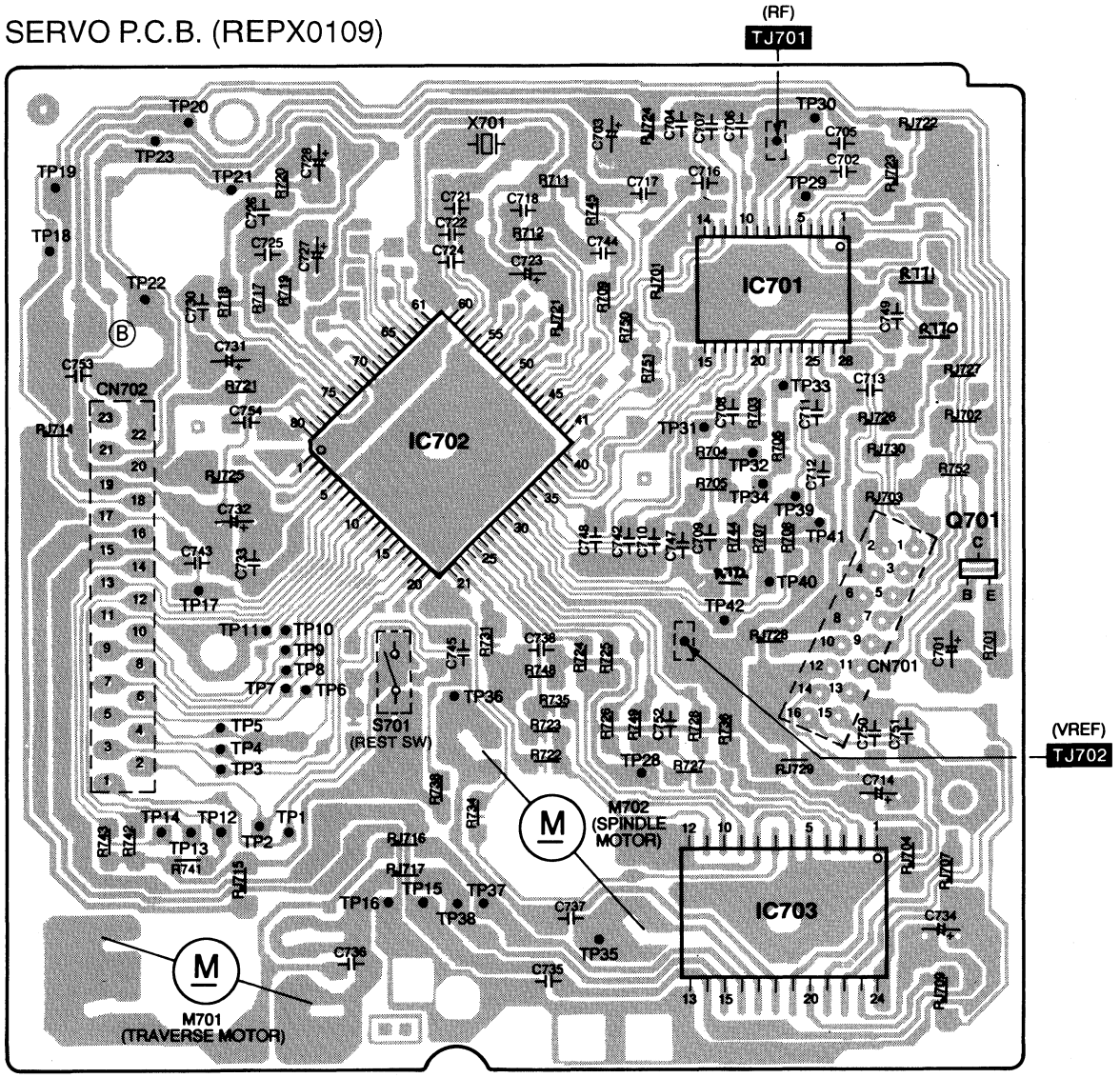

BA4558FE2
IC302
BUFFER AMP.
BA4558FE2
IC307
BUFFER AMP.
BH3854AFS-E2
IC303
SOUND PROCESSOR
BA4558FE2
IC304
BUFFER AMP.
BASS
TONE
TREBLE
REFERENCE VOLTAGE
VOLUME
VOLUME
MATRIX SURROUND
VCC
CONTROL
SP/CLK
SP/DAT
SP/LTH
AKDATA


D850,851,852
D803,D810,D820
D835-D839
Q808
EQ/SPC LED DRIVE
LED_CTL
REW
FWD
DATA
CLK
BU2090F-E2
IC800
LED DRIVE
BU2090F-E2
IC801
LED DRIVE
VP
P.CONT
DCDET
SER1/BCLK/TCLK
/HALT
SER2/ACLK/ SPCLK
SER3/KCLK/ SPDATA
SER4/KDATA
SER5/LTM
SP/CLK
SP/DAT
AKDATA
SP/LTH
M38197MA194F
IC803(1/4)
SYSTEM CONTROL / FL DRIVE
KEY4
KEY1
KEY SW
/RESET
Q804
RESET DRIVE
/HALT

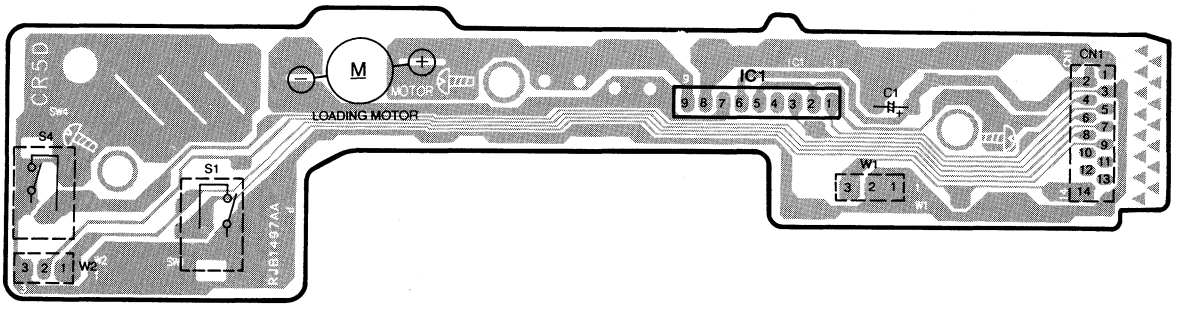

Q301,303(401,403)
SWITCHING
(V.BASS)
ATTENUATOR
Q405
MUTING
CONTROL
NF
10
(14)
11
(13)
4
(1)
6
9
3
7
2
8
DETECTION
POWER
ON/OFF
BIAS
MUTING
RSN3502
IC305
POWER AMP.
+B1
-B1
HEADPHONE
SPEAKERS
(6Ω)
LCH
SIGNAL LINES
MAIN SIGNAL LINE
FM OSC SIGNAL LINE
FM SIGNAL LINE
AM OSC SIGNAL LINE
AM SIGNAL LINE
FM & AM SIGNALS LINE
RECORDING SIGNAL LINE
PLAYBACK SIGNAL LINE
CD SIGNAL LINE
Q406,407
OVERLOAD
DET.
Q513,525
SWITCHING
REGULATOR
AN78M05
IC310
Q512
+B1
+B2
+B4
+B
+B5
Q514
Q515
Q511,526
Q507
Q510
Q509
Q517
Q502,503
Q504
D520
D521
D526
D500,501
D502,503
RLY501
T501
POWER TRANSFORMER
AC IN
F1
Z500
Q500
RELAY DRIVER
Q501
D513
P.CONT
VP
/HALT
DCDET
D509
D510
TO
FL DISPLAY

■ Printed Circuit Board

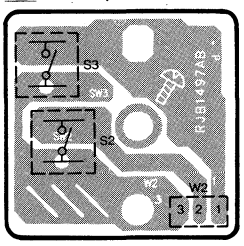
A SERVO P.C.B. (REPX0109)



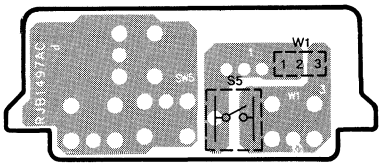
K LOADING MOTOR P.C.B. (REP2182A-N)



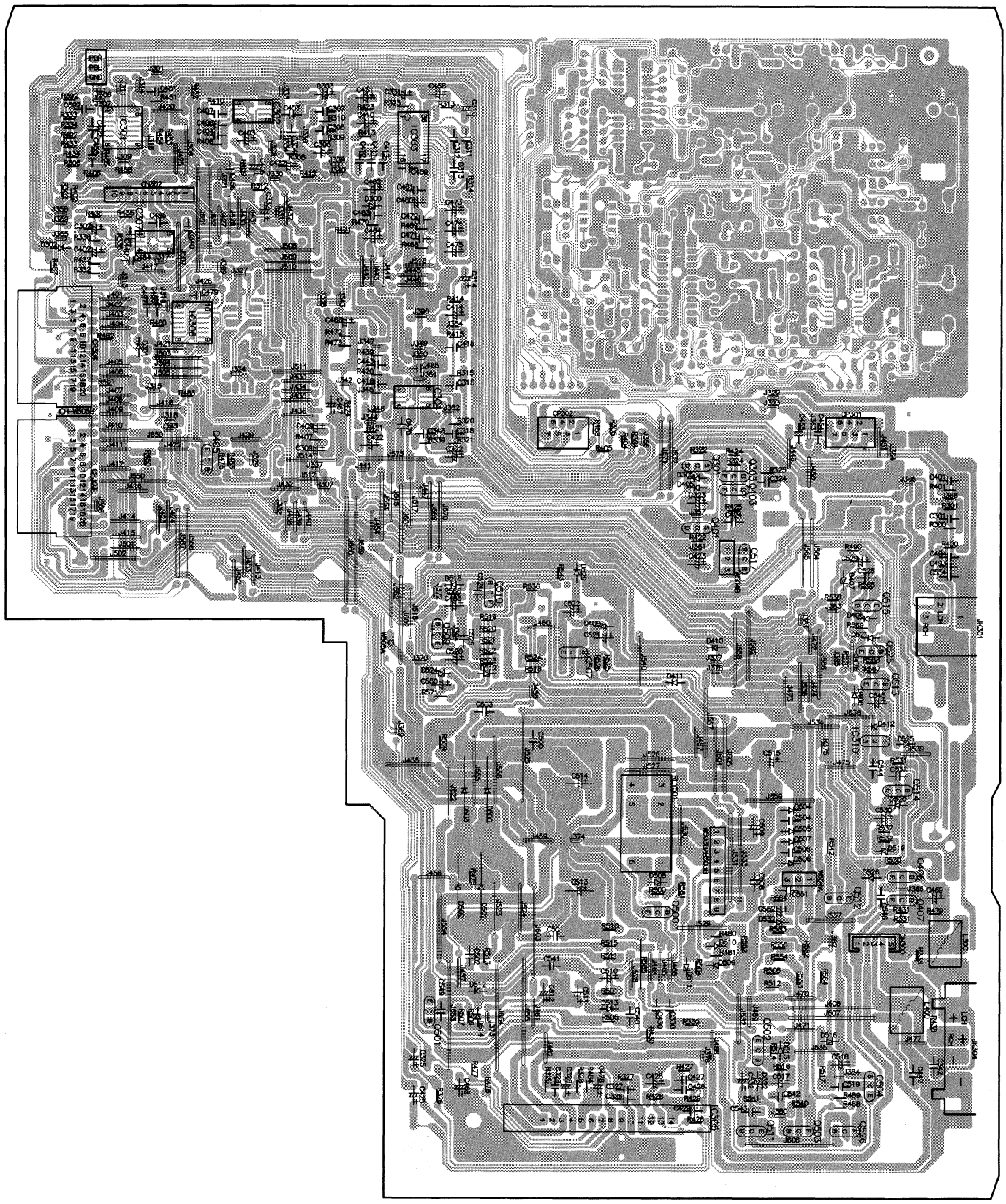
J DETECTING SWITCH (2) P.C.B. (REP2182A-N)



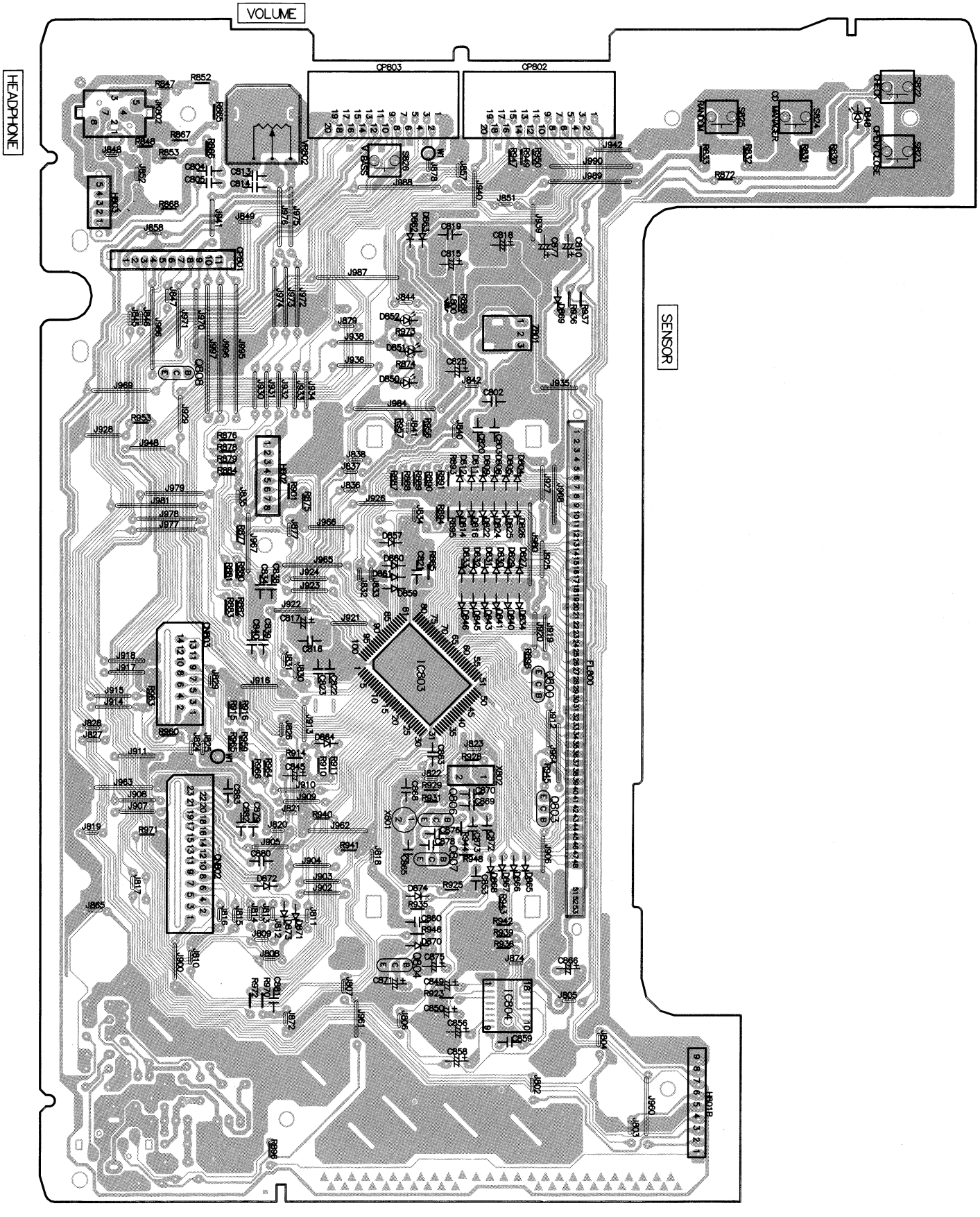
I DETECTING SWITCH (1) P.C.B. (REP2182A-N)



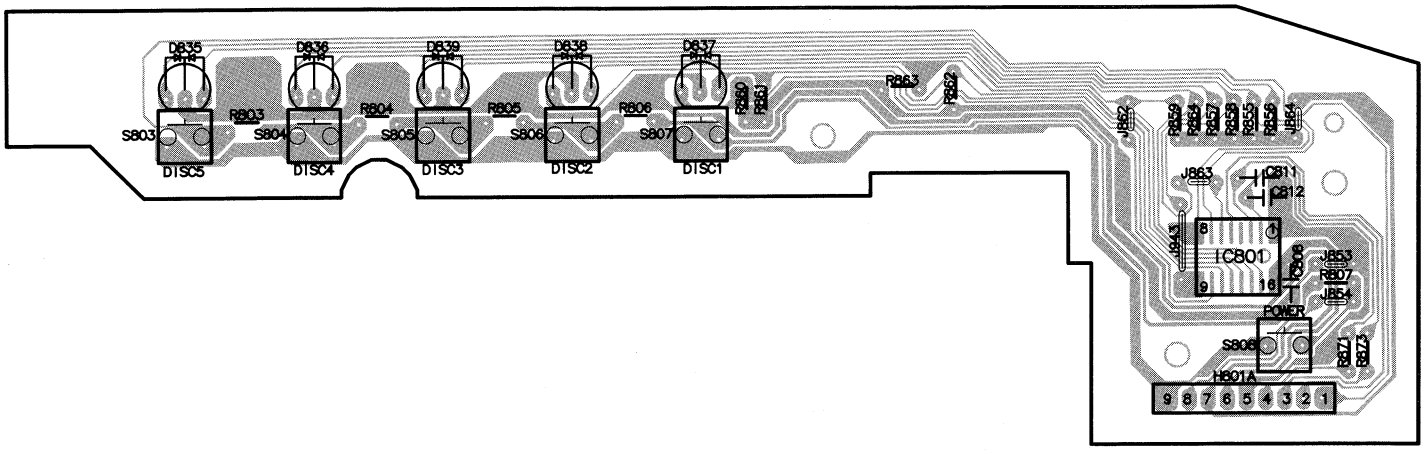
B MAIN P.C.B. (REPX0114B)...(E,EG)
(REPX0114C)...(EB)



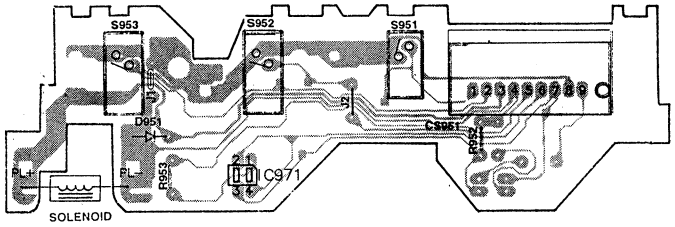
G PANEL P.C.B. (REPX0113B)



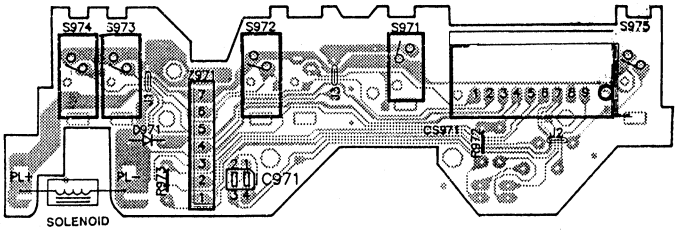
D LED P.C.B. (REPX0113B)



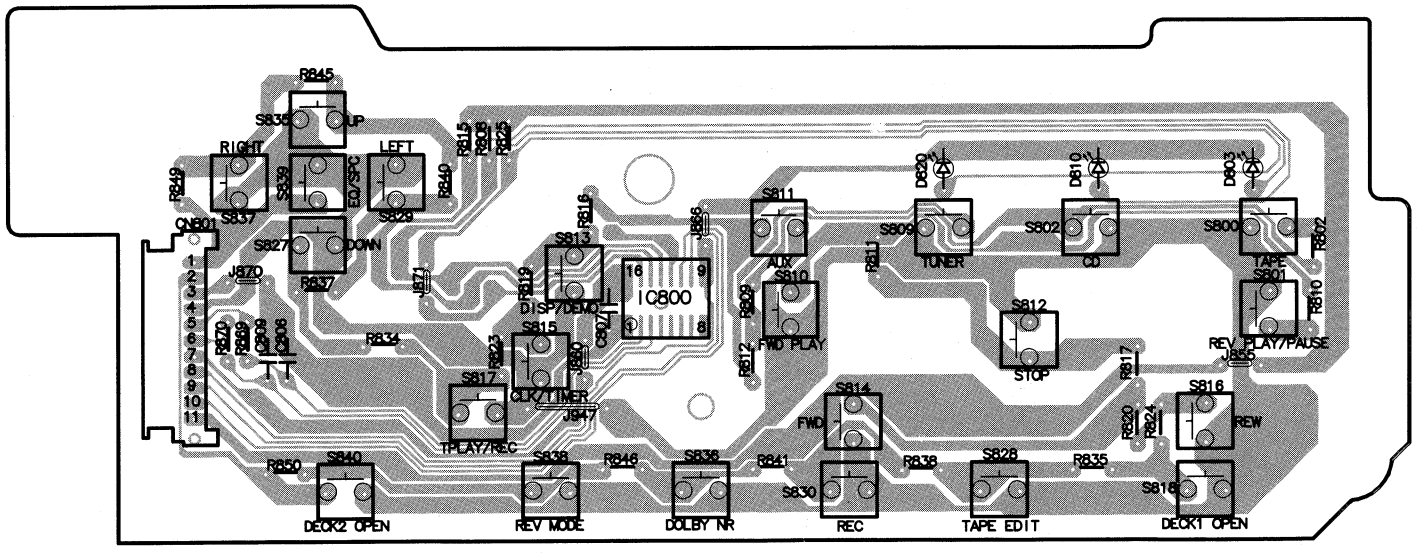
M MECHANISM (DECK 1) P.C.B. (REPX0108A)



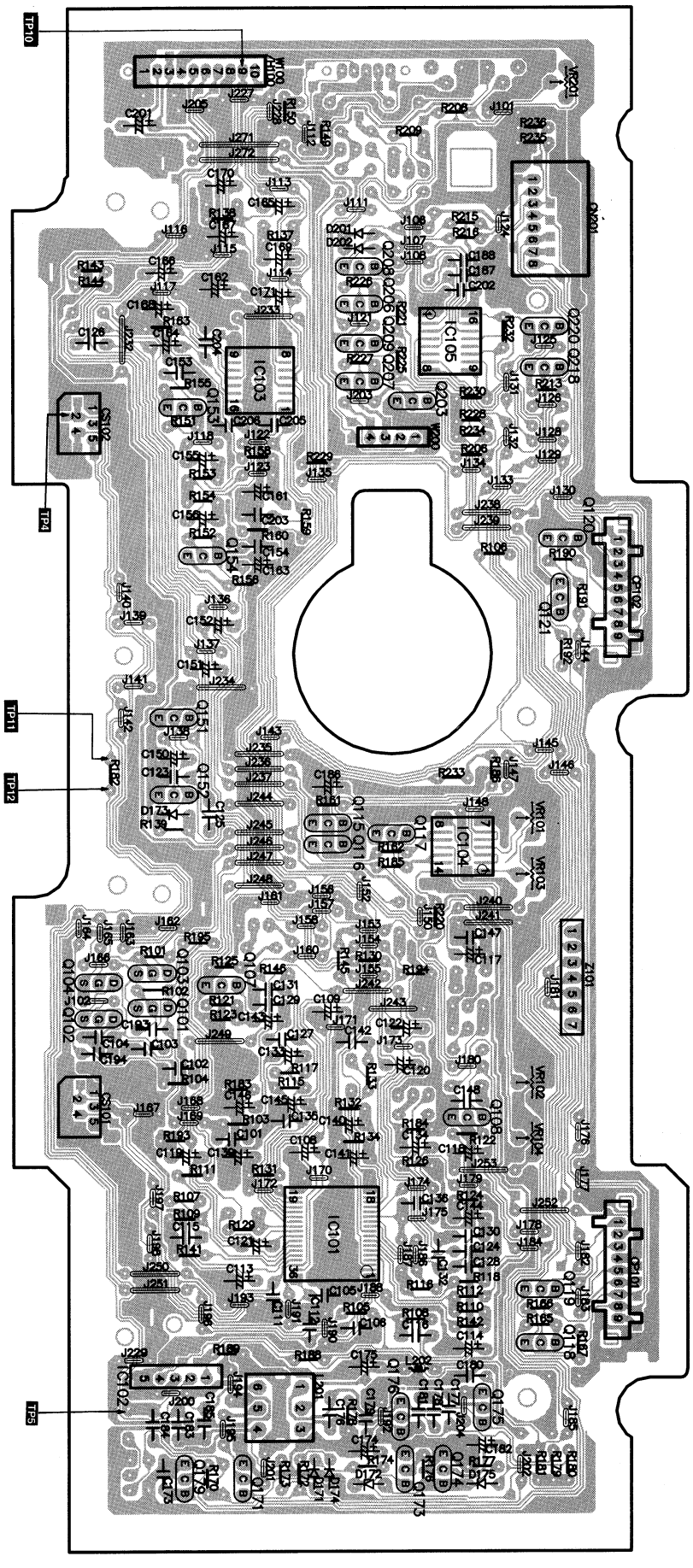
L MECHANISM (DECK 2) P.C.B. (REPX0108)



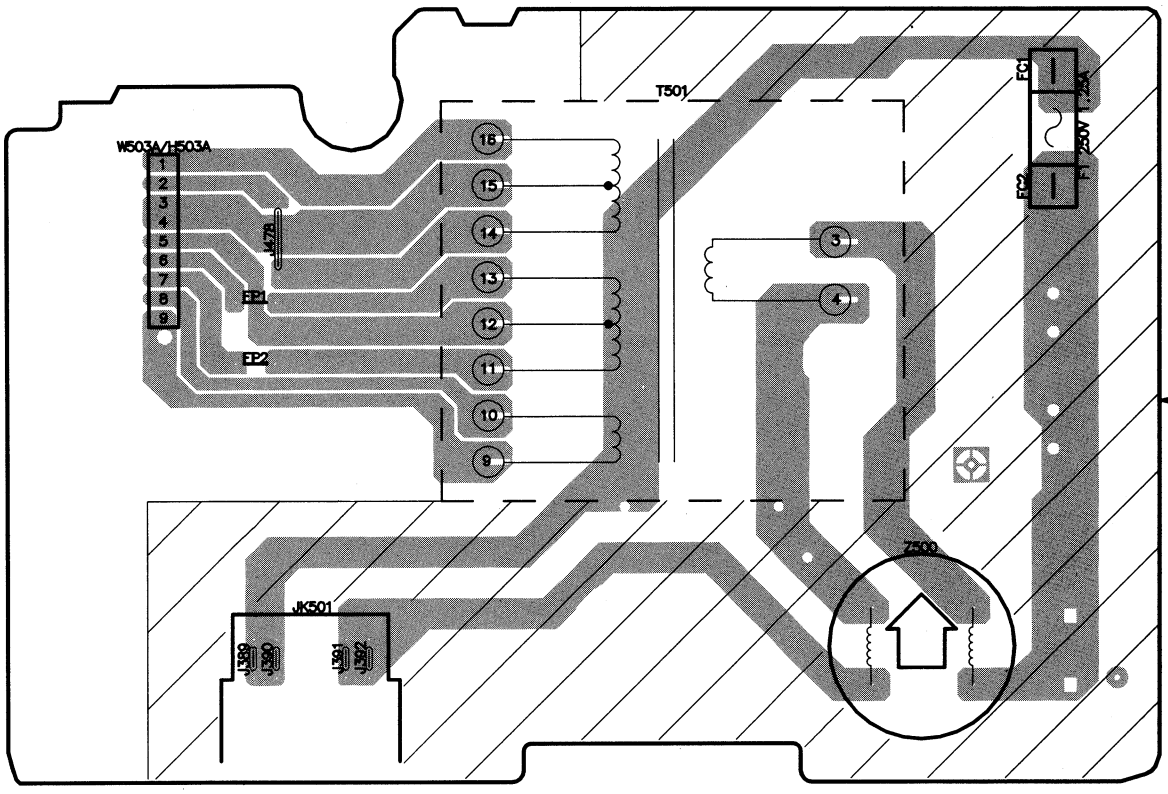
E OPERATION P.C.B. (REPX0113B)



C DECK P.C.B. (REP2200J)

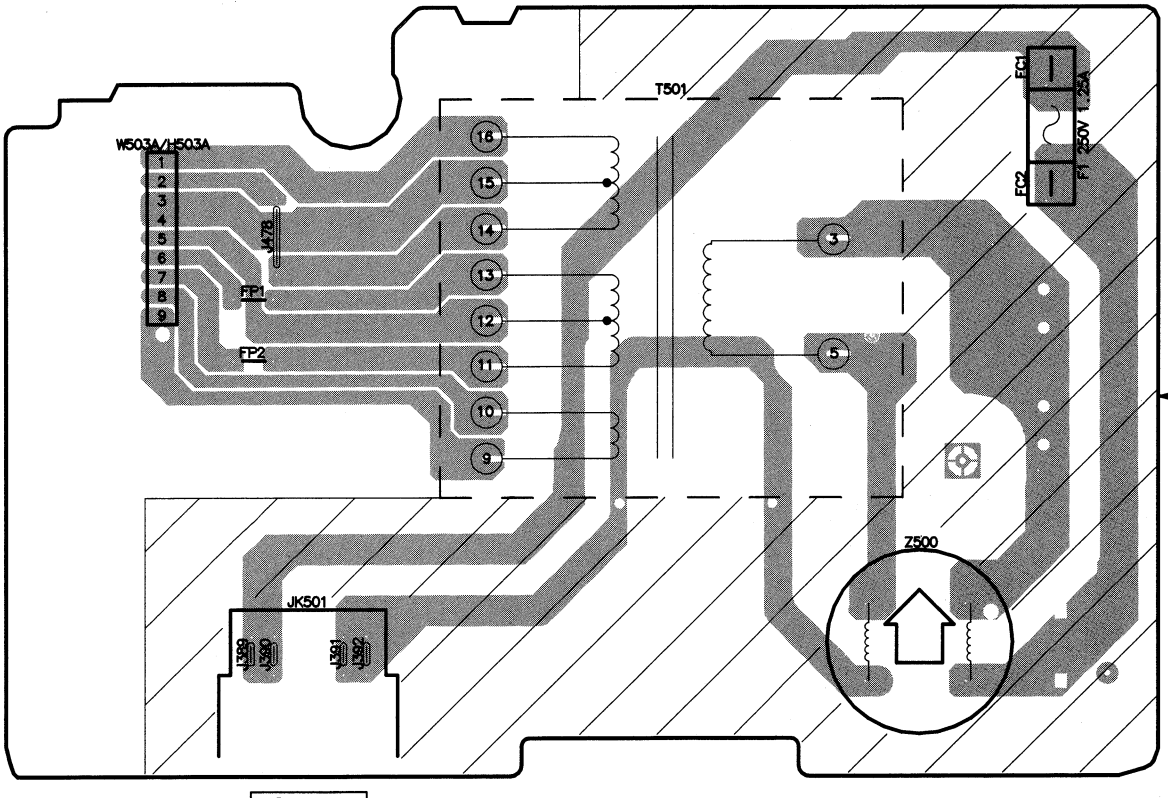


F TRANSFORMER P.C.B. (REPX0114B)...(E,EG)



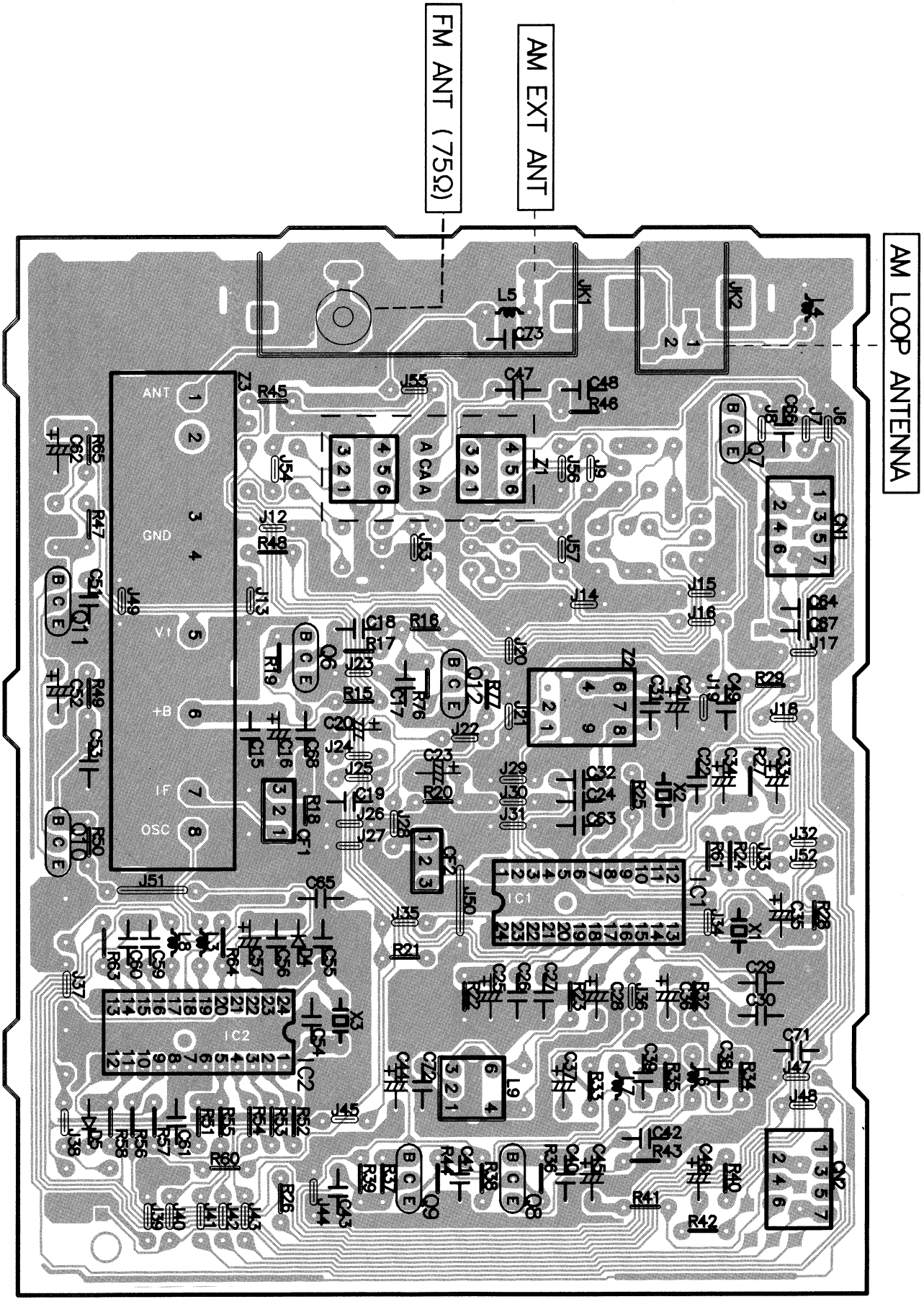
AC IN ~
230V
...E/EG
50Hz

F TRANSFORMER P.C.B. (REPX0114C)...(EB)



AC IN ~
230V–240V
...EB
50Hz

H TUNER P.C.B. (REP2000L)



■ Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)
Note :

< for Servo Circuit >

- **S701** : Reset switch

< for Panel circuit, Led Circuit and Operation Circuit >

- **S800** : Tape/deck select switch
- **S801** : Reverse play/pause, Tune/time adjust down switch
- **S802** : CD select switch
- **S803** : DISC 5 select switch
- **S804** : DISC 4 select switch
- **S805** : DISC 3 select switch
- **S806** : DISC 2 select switch
- **S807** : DISC 1 select switch
- **S808** : Power switch
- **S809** : Tuner select switch
- **S810** : FWD play, tune/time adjust up switch
- **S811** : AUX select switch
- **S812** : Stop, tune mode select switch
- **S813** : Display, demonstration select switch
- **S814** : FWD, memory/set switch
- **S815** : Clock, timer select switch
- **S816** : REW, FM mode/BP select switch
- **S817** : Play timer/REC timer select switch
- **S818** : Deck 1 open switch
- **S822** : Disc check open switch
- **S823** : Disc tray open/close switch
- **S824** : CD manager switch
- **S825** : Random play switch
- **S826** : V. Bass switch
- **S827** : Down select switch
- **S828** : Tape Edit switch
- **S829** : Left select switch
- **S830** : Record select switch
- **S835** : Up select switch
- **S837** : Right select switch
- **S838** : Reverse mode select switch
- **S839** : EQ/SPACE select switch
- **S840** : Deck 2 open switch
- **VR802** : Volume control

< for Deck circuit, Mechanism (Deck 1) circuit and Mechanism (Deck 2) circuit >

- **S951** : Deck 1 Mode detect switch.
- **S952** : Deck 1 Tape detect switch.
- **S953** : Deck 1 CrO_2 detect switch.
- **S971** : Deck 2 Mode detect switch.
- **S972** : Deck 2 Tape detect switch.
- **S973** : Deck 2 CrO_2 detect switch.
- **S974** : Deck 2 Record detect switch.
- **S975** : Deck 2 Record detect switch.
- **VR201** : Deck 2 Normal speed adjustment.

< for Loading Motor circuit, Detecting Switch (1) Circuit and Detecting Switch (2) Circuit >

- **S1, S4** : Leaf switch.
- **S2, S3, S5** : Mecha switch.

•Signal line

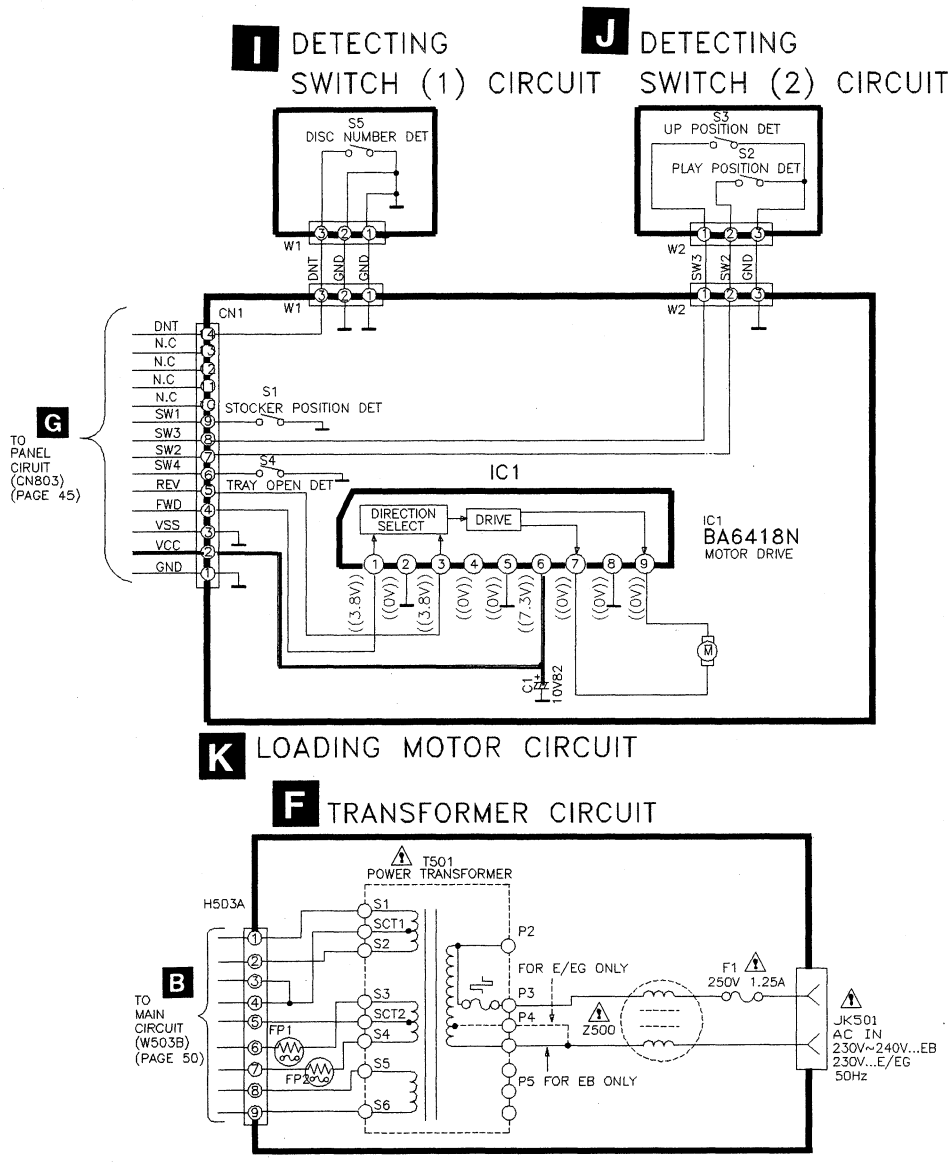
: +B line
: –B line
: FM/AM signal line
: Main signal line
: Playback signal line
: Record signal line
: CD signal line
: FM signal line
: AM signal line
: AM OSC signal line
: FM OSC signal line
: Aux signal line

•The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark : Playback << >>.....Rec { } : Tuner (( )) : CD ( ) ..... AM < > ..... FM

•Importance safety notice:
Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !
IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
•Cover the parts boxes made of plastics with aluminium foil.
•Put a conductive mat on the work table.
•Ground the soldering iron.
•Do not touch the pins of IC, LSI or VLSI with fingers directly.



C DECK CIRCUIT

IC101
M51167BFP-TB
P.B EQ/REC AMP/ ALC/TPS AMP

IC105
BU2040F-E2
SYSTEM CONTROL (IO EXPANDER)

Q218
BN1A4MTA
SWITCHING (REC;ON)

Q203
2SD965RTA
MOTOR DRIVE

Q206,Q207
2SB621RTA
SOLENIOD DRIVE

Q208,Q209
BA1A4ZTA
SOLENIOD DRIVE

Q220
BN1L3NTA
SWITCHING

Q151,Q152
BA1L4ZTA
SWITCHING (PLAY;ON)

Q107
BA1L4ZTA
P.B EQ/REC EQ (CRO2/METAL)

Q115,Q116
2SD1020HTA
MUTING DRIVE

Q101,Q102
2SJ164QRTA
HEAD SELECT (REC;ON)

Q103,Q104
2SJ164QRTA
HEAD SELECT (PLAY;ON)

Q108
BA1L4ZTA
P.B EQ/REC EQ (CRO2/METAL)

Q118,Q119,Q120,Q121
2SC2785FTA
INTERFACE

IC102
BA7755A
R/P SELECT

Q175,Q176
2SD1302STA
BIAS OSC (PLAY;ON)

Q179
2SC2784FTA
SWITCHING (BEAT PROOF)

Q174
2SC2785FTA
BIAS OSC CONTROL

Q173
BA1L4ZTA
BIAS OSC CONTROL

Q171
2SD1302STA
SWITCHING(BEAT PROOF)

IC104
BU4066BCF-E2
DECK 1/2 SELECT

Q117
BA1L4MTA
SWITCHING

TO L MECHANISM (DECK2) CIRCUIT (CS971) (PAGE 39)

TO M MECHANISM (DECK1) CIRCUIT (CS951) (PAGE 39)

MOTOR

IC101
M51167BFP-TB
P.B EQ/REC AMP/ ALC/TPS AMP

IC105
BU2040F-E2
SYSTEM CONTROL (IO EXPANDER)

Q218
BN1A4MTA
SWITCHING (REC;ON)

Q203
2SD965RTA
MOTOR DRIVE

Q206,Q207
2SB621RTA
SOLENOID DRIVE

Q208,Q209
BA1A4ZTA
SOLENOID DRIVE

Q220
BN1L3NTA
SWITCHING

Q151,Q152
BA1L4ZTA
SWITCHING (PLAY;ON)

Q107
BA1L4ZTA
P.B EQ/REC EQ (CRO2/METAL)

Q115,Q116
2SD1020HTA
MUTING DRIVE

Q117
BA1L4MTA
SWITCHING

IC103
CXA1102M-TA
DOLBY B NR

Q153,Q154
2SC1740SLNET
BUFFER AMP

IC971
ON2180RLC
PHOTO INTERRUPTOR

IC951
ON2180RLC
PHOTO INTERRUPTOR

TO B MAIN CIRCUIT (CN302) (PAGE 48)

TO G PANEL CIRCUIT (H802) (PAGE 45)

TO C DECK CIRCUIT (CP102) (PAGE 37)

TO C DECK CIRCUIT (CP101) (PAGE 38)

TO M MECHANISM (DECK1) CIRCUIT (CS951) (PAGE 39)

L MECHANISM(DECK2) CIRCUIT

M MECHNAMISM(DECK1) CIRCUIT

SA-AK20 SA-AK20

A SERVO CIRCUIT

OPTICAL PICKUP

TRACKING COIL

FOCUS COIL

Q701 2SB709S LASER POWER DRIVE

IC701 AN8835SBE1 SERVO AMP

IC702 MN662741RPA SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR / DIGITAL FILTER / D/A CONVERTER

IC703 AN8389SE1 FOCUS COIL / TRACKING COIL / TRAVERSE MOTOR / SPINDLE MOTOR DRIVE

M702 SPINDLE MOTOR

M701 TRAVERSE MOTOR

TO G PANEL CIRCUIT (CN802) (PAGE 45)

SA-AK20 SA-AK20

A SERVO CIRCUIT

OPTICAL PICKUP

TRACKING COIL

FOCUS COIL

Q701 2SB709S LASER POWER DRIVE

IC701 AN8835SBE1 SERVO AMP

IC702 MN662741RPA SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR / DIGITAL FILTER / D/A CONVERTER

IC703 AN8389SE1 FOCUS COIL / TRACKING COIL / TRAVERSE MOTOR / SPINDLE MOTOR DRIVE

M702 SPINDLE MOTOR

M701 TRAVERSE MOTOR

CN701

CN702

S701 (REST)

TO G PANEL CIRCUIT (CN802) (PAGE 45)

E

IC702
MN662741RPA
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR / DIGITAL FILTER / D/A CONVERTER

TO G
PANEL CIRCUIT
(CN802)
(PAGE 45)

D LED CIRCUIT

IC801
BU2090F-E2
LED DRIVE

D835–D839
SPR505MDTT

H801A
1 MIC_SW
2 HC
3 DICLK
4 DDATA/ASCLK
5 GND
6 5V
7 7.5V
8 K1
9 –VREF

E OPERATION CIRCUIT

IC800
BU2090F-E2
LED DRIVE

CN801
1 K2
2 K3
3 DGND
4 VREF–
5 ISDATA/KCLK
6 DICLK
7 5V
8 EQ/SPC
9 CH_REW
10 CH_FWD
11 7.5V

H803
1 AMP–R
2 AMP–L
3 GND
4 SP–R
5 SP–L

TO B
MAIN CIRCUIT
(CN300)
(PAGE 50)

HEADPHONE

G PANEL CIRCUIT

FL800

Q800
2SC2785FTA
POWER SUPPLY FOR FL800

Q803

IC803
IC803
M38197MA194F
SYSTEM CONTROL / FL DRIVE

IC804
IC804
BA3835F-E2
SPECTRUM EQUALIZER

Q808
BN1A4MTA
LED DRIVE

H801B
CP801

FL800

Q800
2SC2785FTA
POWER SUPPLY
FOR FL800

Q803
2SC2785FTA
POWER SUPPLY
FOR FL800

IC803
IC803
M38197MA194F
SYSTEM CONTROL / FL DRIVE

Q806,Q807
2SC2785FTA
X'TAL CONTROL

Q804
BA1L4MTA
RESET DRIVE

D857,D859,D860,D861
1SS254TA

D865 1SS254TA
D866 1SS254TA
D867 1SS254TA
D868 1SS254TA

D869
MTZJ5R6BTA

D874 1SS291TA
D862 1SS291TA
D863 1SS291TA

D864 1SS254TA

D870 1SS254TA
D871 1SS254TA
D872 1SS254TA
D873 1SS254TA

CN803
1 PGND
2 P7.5V
3 VSS
4 CHGCONT1
5 CHGCONT2
6 CHSW4
7 CHSW2
8 CHSW3
9 CHSW1
10 N.C
11 N.C
12 N.C
13 N.C
14 CHSW5

TO K LOADING MOTOR CIRCUIT (CN1) (PAGE 36)

CN802
1 RESTSW
2 N.C
3 /CDRESET
4 STATUS
5 DMUTE
6 SUBQ
7 SQCLK
8 BLKCLK
9 /TLOCK
10 /FLOCK
11 SENSE
12 MLD
13 MDATA
14 MCLK
15 PGND
16 CD7.5V
17 TX
18 CD 5V
19 DGND
20 CD 5V
21 CD R
22 AGND
23 CDL

TO A SERVO CIRCUIT (CN702) (PAGE 41)

CP803
1 GND
2 CD5V
3 N.C
4 DCDET
5 PCONT
6 N.C
7 N.C
8 SPE
9 CD 7.5V
10 N.C
11 P7.5V
12 PGND
13 /HALT
14 N.C
15 5V
16 CDL
17 CDR
18 N.C
19 AGND
20 7.5V

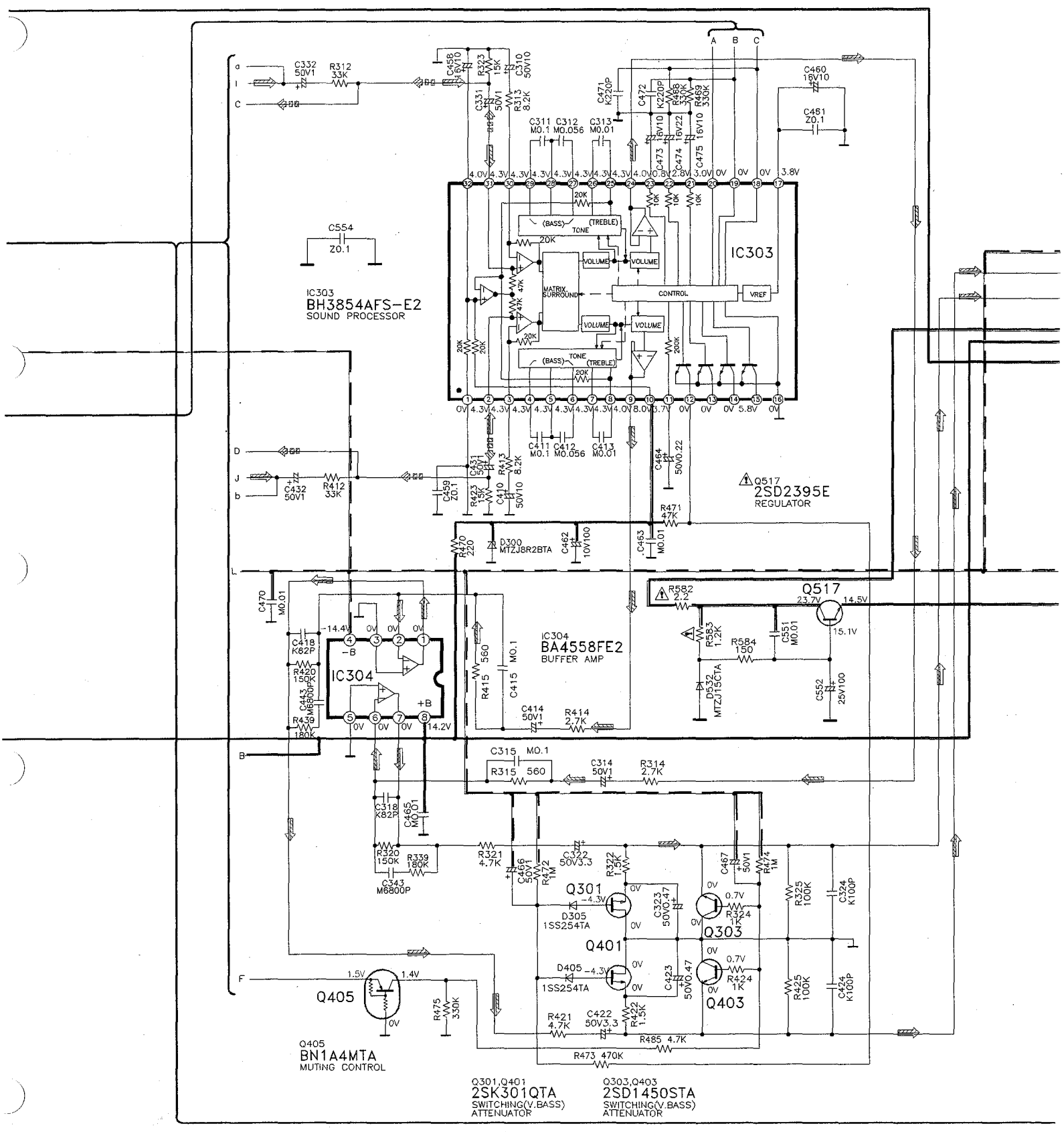
TO B MAIN CIRCUIT (CP303) (PAGE 48)

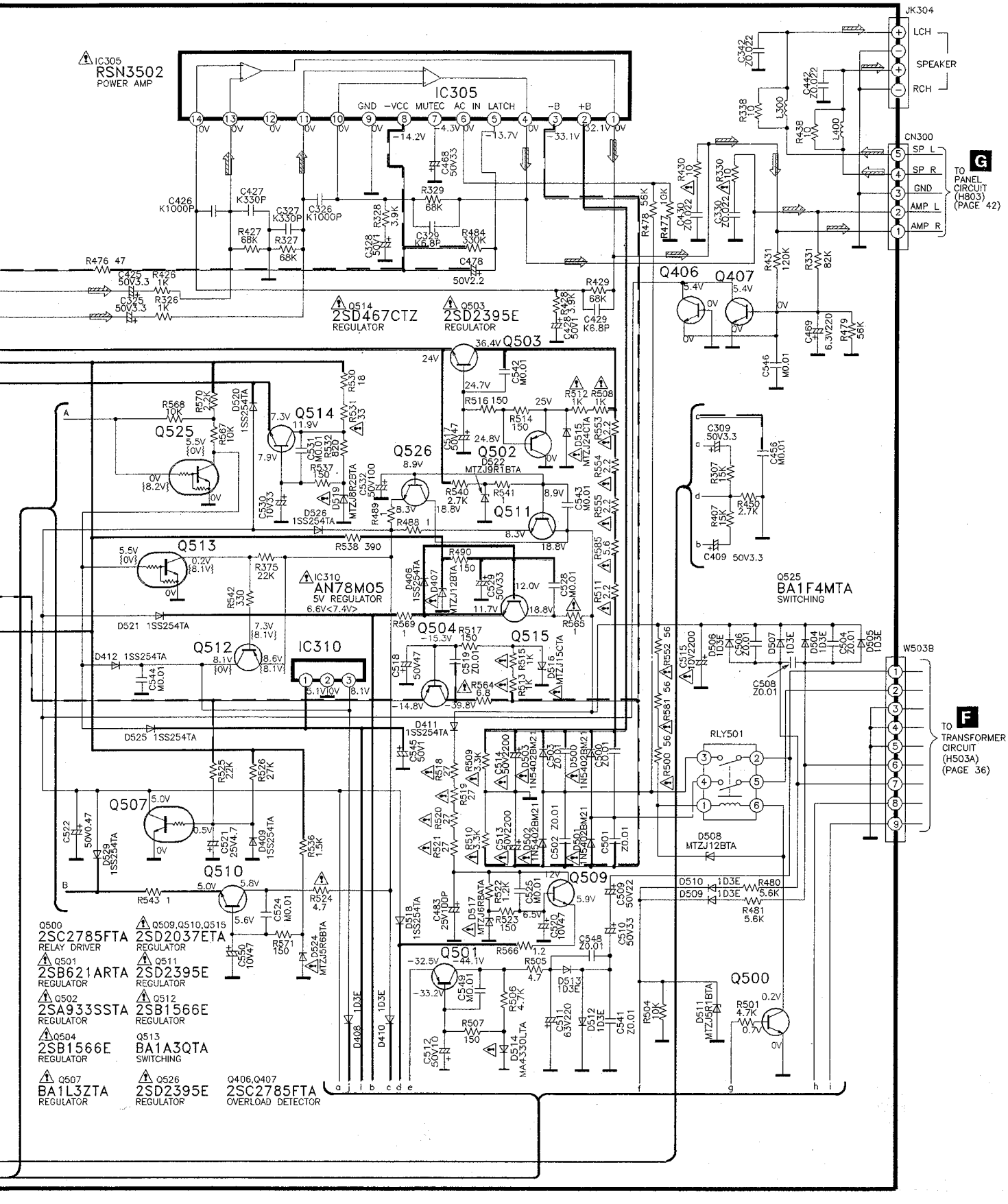
CP802
20 SYSRV
19 ASCLK
18 ISDATA
17 N.C
16 M/PLLCLK
15 N.C
14 M/PLLDATA
13 MLD/PLLCE
12 DGND
11 TX
10 AKDATA
9 KLATH
8 N.C
7 N.C
6 DO
5 SD
4 STEREO
3 VP
2 FLC
1 FL1

TO B MAIN CIRCUIT (CP304) (PAGE 46)

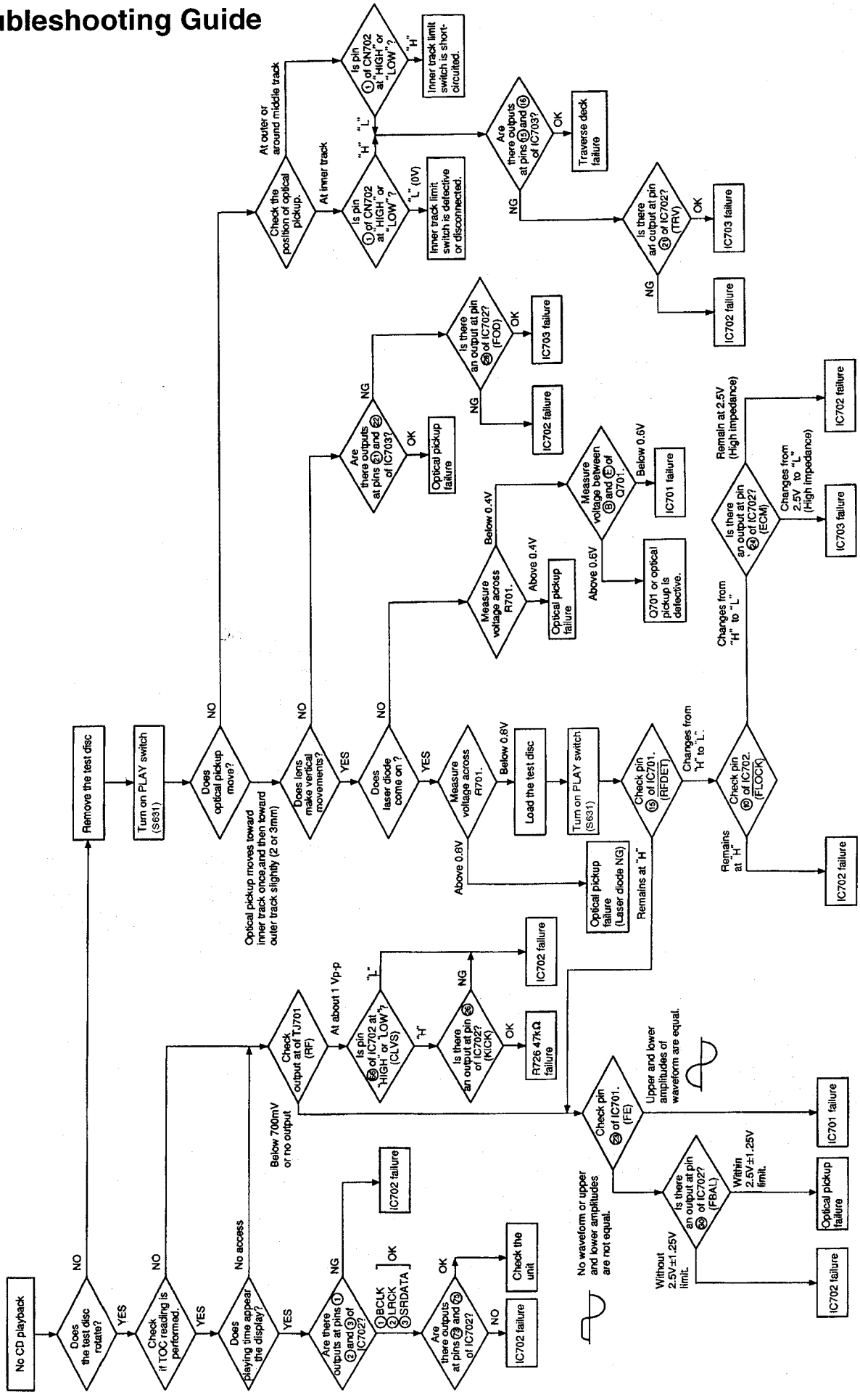
H802
1 5V
2 MKDATA
3 MKCLK
4 VREF-
5 TPS
6 ADIN6
7 ADIN7
8 VREF+

TO C DECK CIRCUIT (CN201) (PAGE 39)

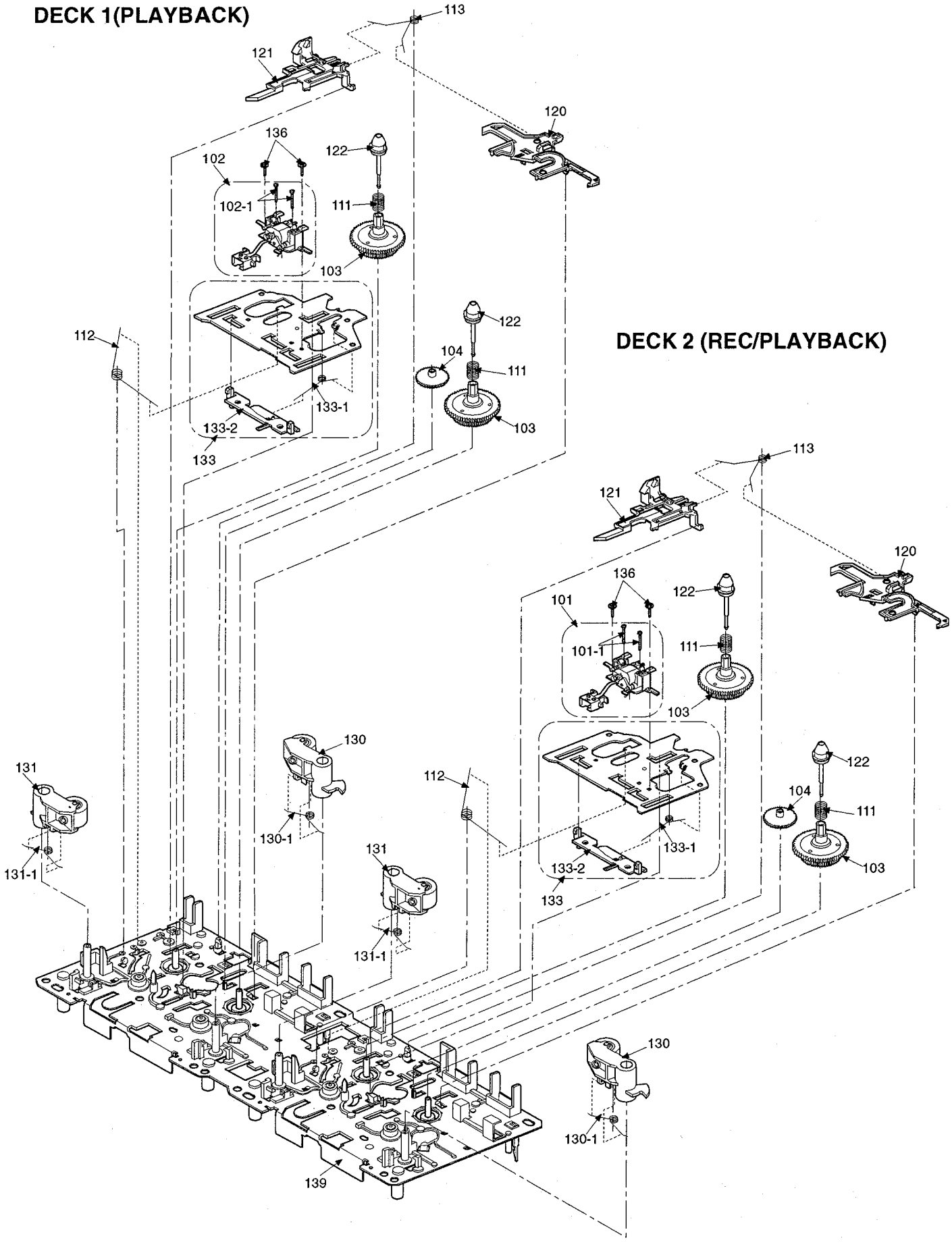

IC303
BH3854AFS-E2
SOUND PROCESSOR
IC303
IC304
BA4558FE2
BUFFER AMP
Q517
2SD2395E
REGULATOR
Q405
BN1A4MTA
MUTING CONTROL
Q301,Q401
2SK301QTA
SWITCHING(V.BASS)
ATTENUATOR
Q303,Q403
2SD1450STA
SWITCHING(V.BASS)
ATTENUATOR
D300
MTZJ8R2BTA
D305
1SS254TA
D405
1SS254TA
D532
MTZJ15CTA
VOLUME
TONE
(BASS)
(TREBLE)
MATRIX SURROUND
CONTROL
VREF


IC305
RSN3502
POWER AMP
IC305
GND -VCC MUTEC AC IN LATCH -B +B
JK304
LCH
SPEAKER
RCH
CN300
SP L
SP R
GND
AMP L
AMP R
G
TO PANEL CIRCUIT (H803) (PAGE 42)
Q514
2SD467CTZ
REGULATOR
Q503
2SD2395E
REGULATOR
Q406
Q407
Q525
Q526
Q502
Q511
Q513
Q512
Q507
Q510
Q509
Q501
Q500
IC310
AN78M05
5V REGULATOR
Q525
BA1F4MTA
SWITCHING
RLY501
D508
MTZJ12BTA
W5038
F
TO TRANSFORMER CIRCUIT (H503A) (PAGE 36)
Q500
2SC2785FTA
RELAY DRIVER
Q509,Q510,Q515
2SD2037ETA
REGULATOR
Q501
2SB621ARTA
REGULATOR
Q511
2SD2395E
REGULATOR
Q502
2SA933SSTA
REGULATOR
Q512
2SB1566E
REGULATOR
Q504
2SB1566E
REGULATOR
Q513
BA1A3QTA
SWITCHING
Q507
BA1L3ZTA
REGULATOR
Q526
2SD2395E
REGULATOR
Q406,Q407
2SC2785FTA
OVERLOAD DETECTOR

■ Troubleshooting Guide

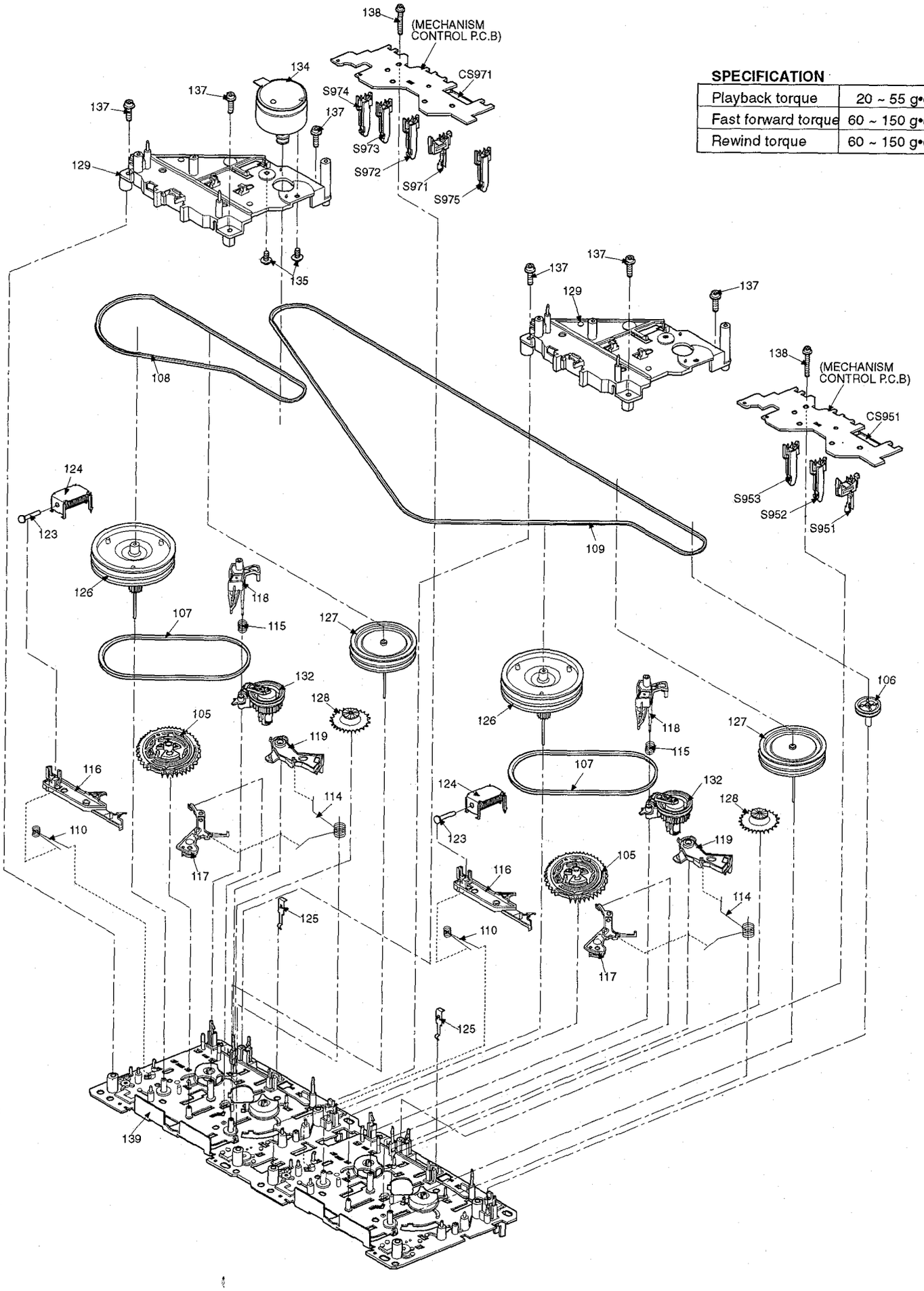

No CD playback
Does the test disc rotate?
NO
YES
Remove the test disc
Check if TOC reading is performed.
NO
YES
Turn on PLAY switch (S631)
Does playing time appear the display?
No access
YES
Does optical pickup move?
NO
Optical pickup moves toward inner track once,and then toward outer track slightly (2 or 3mm)
Are there outputs at pins ① and ② of IC702?
NG
①BCLK ②LRCK ③SRDATA
OK
IC702 failure
Are there outputs at pins ⑦ and ⑧ of IC702?
OK
NO
Check the unit
IC702 failure
Does lens make vertical movements?
NO
YES
Check output at of TJ701 (RF)
Below 700mV or no output
At about 1 Vp-p
Is pin ⑧ of IC702 at "HIGH" or "LOW"? (CLVS)
"L"
"H"
Is there an output at pin ⑧ of IC702? (KICK)
NG
OK
IC702 failure
R726 47kΩ failure
Does laser diode come on ?
NO
YES
Measure voltage across R701.
Below 0.8V
Above 0.8V
Load the test disc
Turn on PLAY switch (S631)
Optical pickup failure (Laser diode NG)
Remains at "H"
Check pin ⑮ of IC701. (RFDET)
Changes from "H" to "L".
Check pin ㉙ of IC701. (FE)
Upper and lower amplitudes of waveform are equal.
No waveform or upper and lower amplitudes are not equal.
Is there an output at pin ㉚ of IC702? (FBAL)
Within 2.5V±1.25V limit.
Without 2.5V±1.25V limit.
IC701 failure
Optical pickup failure
IC702 failure
Check pin ⑯ of IC702. (FLOCK)
Changes from "H" to "L".
Remains at "H"
IC702 failure
Is there an output at pin ㉜ of IC702? (ECM)
Remain at 2.5V (High impedance)
Changes from 2.5V to "L" (High impedance)
IC702 failure
IC703 failure
Measure voltage between Ⓑ and Ⓔ of Q701.
Below 0.6V
Above 0.6V
IC701 failure
Q701 or optical pickup is defective.
Measure voltage across R701.
Below 0.4V
Above 0.4V
Optical pickup failure
Optical pickup moves toward inner track once,and then toward outer track slightly (2 or 3mm)
Check the position of optical pickup.
At outer or around middle track
At inner track
Is pin ① of CN702 at "HIGH" or "LOW"?
"H"
"L"
Inner track limit switch is short-circuited.
Inner track limit switch is defective or disconnected.
Are there outputs at pins ⑮ and ⑯ of IC703?
OK
Traverse deck failure
NG
Is there an output at pin ㉑ of IC702? (TRV)
OK
IC703 failure
NG
IC702 failure
Is there an output at pin ㉘ of IC702? (FOD)
OK
IC703 failure
NG
IC702 failure
Are there outputs at pins ㉑ and ㉒ of IC703?
OK
Optical pickup failure
NG

■ Mechanism Parts Location (RAA3405)



SPECIFICATION

Playback torque	20 ~ 55 g•cm
Fast forward torque	60 ~ 150 g•cm
Rewind torque	60 ~ 150 g•cm



■ Mechanism Parts List

Notes : [M] in Remarks column indicates parts supplied by **MESA**

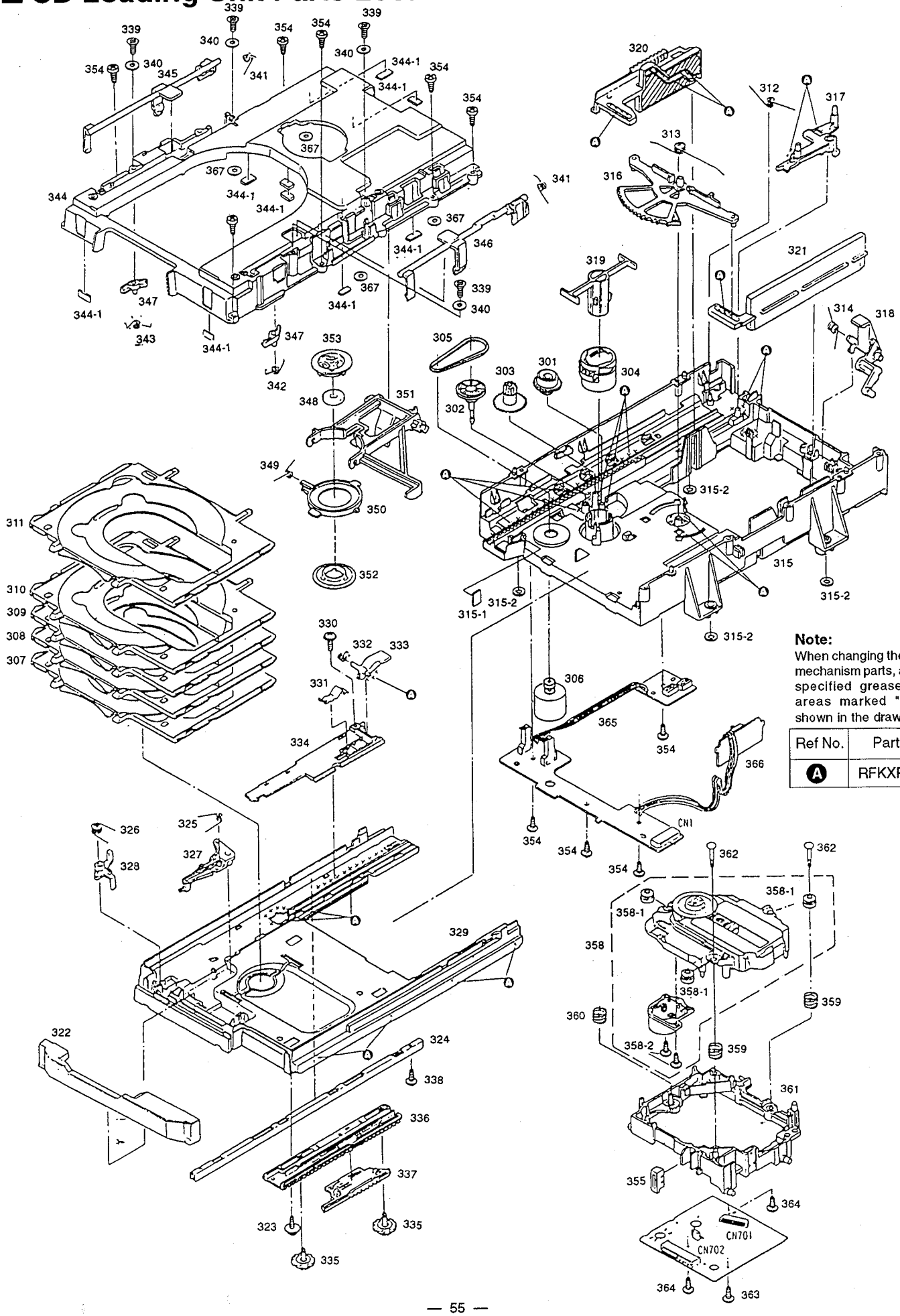
Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0043	R/P HEAD BLOCK UNIT	[M]
101-1	RHE5152ZB	SCREW	[M]
102	RED0038	P/B HEAD BLOCK UNIT	[M]
102-2	RHE5152ZB	SCREW	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
106	RDR0029	RELAY PULLEY	[M]
107	RDV0033-1	WINDING BELT	[M]
108	RDV0034	CAPSTAN BELT 'A'	[M]
109	RDV0035	CAPSTAN BELT 'B'	[M]
110	RUW147ZA	SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAB PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SPRING	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RSJ0003	PLUNGER	[M]
125	RUS609ZC	PACK SPRING	[M]
126	RXF0049	FLYWHEEL 'F' ASS'Y	[M]
127	RXF0050	FLYWHEEL 'R' ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283	SUB-CHASSIS	[M]
130	RXL0124	PINCH ROLLER 'F' ASS	[M]
130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
131	RXL0125	PINCH ROLLER 'R' ASS	[M]
131-1	RMB0402	PINCH ARM SPRING 'R'	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412	HEAD PANEL ASS'Y	[M]
133-1	RMB0405	F.R ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0055-1	CAP MOTOR ASS'Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJXED70-K	CHASSIS ASS'Y	[M]

■ Loading Mechanism Parts List

Notes : [M] in Remarks column indicates parts supplied by **MESA**

Ref No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RDG0309	RELAY GEAR	[M]
302	RDG0310	PULLEY GEAR	[M]
303	RDG0311	DRIVE GEAR	[M]
304	RDG0313	UP/DOWN GEAR LEVER	[M]
305	RDV0036	BELT	[M]
306	RFKPDS790PK1	MOTOR ASS'Y	[M]
307	RGQ0170-K	TRAY 1	[M]
308	RGQ0171-K	TRAY 2	[M]
309	RGQ0172-K	TRAY 3	[M]
310	RGQ0173-K	TRAY 4	[M]
311	RGQ0174-K	TRAY 5	[M]
312	RME0170	LOCK LEVER SPRING	[M]
313	RME0179	ASSIST SPRING	[M]
314	RME0180	TRAY HOLDER SPRING	[M]
315	RFKNACH430GC	MECHA BASE ASS'Y	[M]
315-1	RMF0221	FELT	[M]
315-2	RMG0402-K	RUBBER WASHER	[M]
316	RML0379	CHANGE LEVER	[M]
317	RML0380	LOCK LEVER	[M]
318	RML0383	TRAY HOLDING LEVER	[M]
319	RML0385	UP/DOWN LEVER	[M]
320	RMM0139	SLIDE PLATE LEVER (1	[M]
321	RMM0141	SLIDE PLATE LEVER (2	[M]
322	RGQ0175-K	TRAY ORNAMENT	[M]
323	RHD20010	SCREW DRIVE RACK	[M]
324	RMA0868	SUPPORT ANGLE	[M]
325	RME0171	BASE LOCK LEVER SP	[M]
326	RME0172	CARRIER LOCK LEVER S	[M]
327	RML0377	BASE LOCK LEVER	[M]
328	RML0378	CARRIER LOCK LEVER	[M]
329	RMR0884-K	TRAY BASE	[M]
330	RHD20009-1	SCREW CARRIER	[M]
331	RMC0274	TRAY FOOK SPRING	[M]
332	RME0173	CARRIER ARM SPRING	[M]
333	RML0376-1	CARRIER ARM	[M]
334	RMM0137	CARRIER LEVER	[M]
335	RDG0312	SPEED UP GEAR	[M]
336	RMM0134	DRIVE GEAR	[M]
337	RMM0135	CUSHION RACK	[M]
338	XTN2+6F	SCREW SUPPORT ANGLE	[M]
339	XTS3+8J	SCREW	[M]
340	XWE4E10	CUSHION	[M]
341	RME0178	HOLDING SPRING	[M]
342	RME0181	UP PREVENTION SP (R)	[M]
343	RME0182	UP PREVENTION SP (L)	[M]
344	RFKNACH430GD	MECHA COVER ASS'Y	[M]
344-1	RMF0221	FELT	[M]
345	RML0381	HOLDING CATCH (1)	[M]
346	RML0382	HOLDING CATCH (2)	[M]
347	RML0384	UP PREVENTION LEVER	[M]
348	RHM245ZA	MAGNET	[M]
349	RME0174	CLAMP BASE SPRING	[M]
350	RFKNACH430GE	CLAMP BASE ASS'Y	[M]
351	RML0388-1	CLAMP LEVER	[M]
352	RMR0761-W	MAGNET HOLDER LEVER	[M]
353	RMR0899-K	FIXED PLATE	[M]
354	XTB3+10JFZ	SCREW PB, LID	[M]
355	RMR0975-W	TRAVERSE CAP	[M]
358	RAE0150Z	TRAVERSE UNIT	[M]
358-1	SHGD113-1	FLOATING RUBBER	[M]
358-2	SNSD38	SCREW	[M]
359	RME0109	FLOATING SPRING (1)	[M]
360	RME0142	FLOATING SPRING (2)	[M]
361	RMK0293	TRAVERSE CHASSIS	[M]
362	RMS0123-1	FIXED PIN	[M]
363	XTN2+6G	SCREW	[M]
364	XTV2+6G	SCREW	[M]
365	REZ0792	3P WIRE KIT	[M]
366	REZ0793	3P WIRE KIT	[M]
367	RMG0430-Q	RUBBER TUBE	[M]

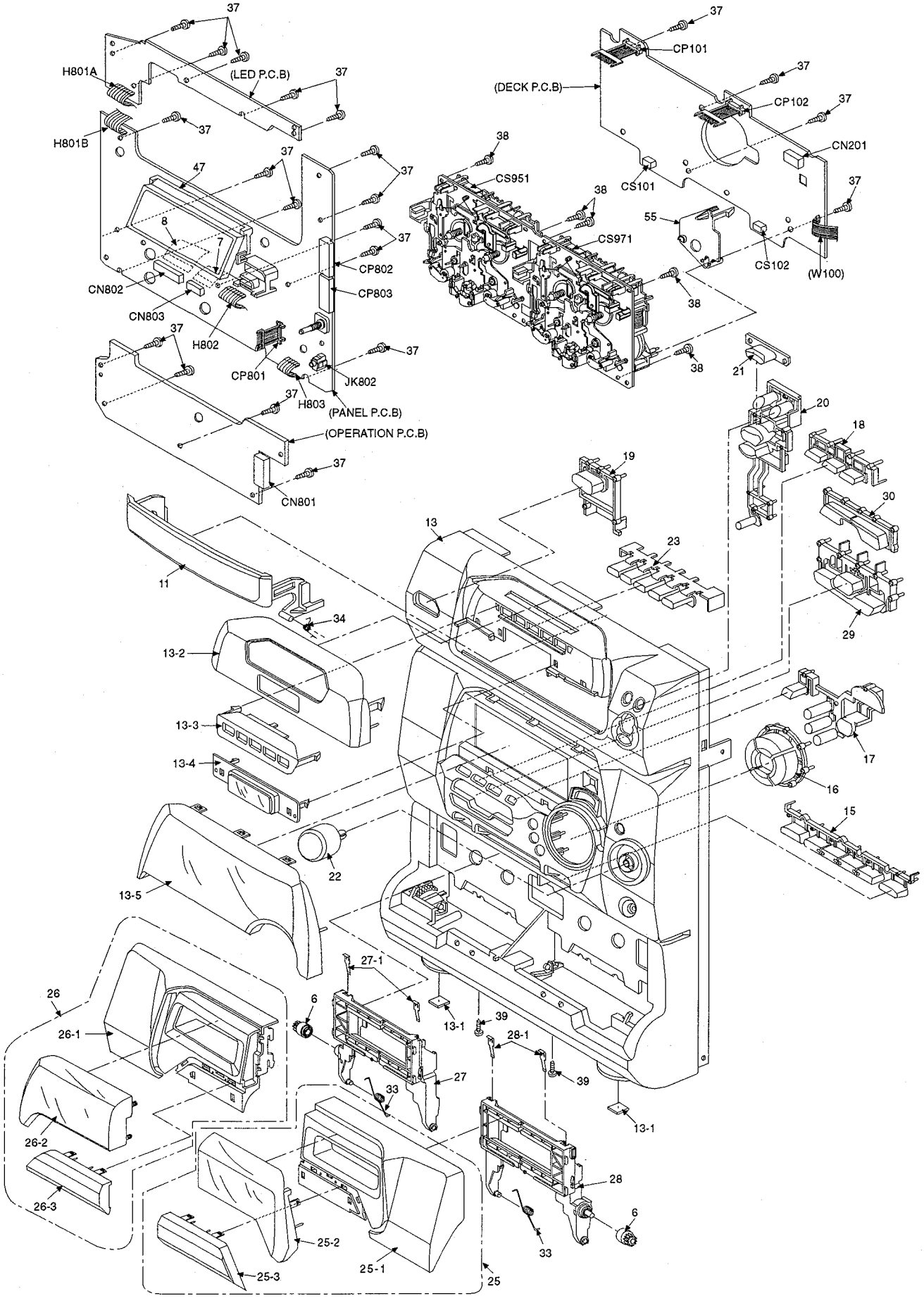
■ CD Loading Unit Parts Location

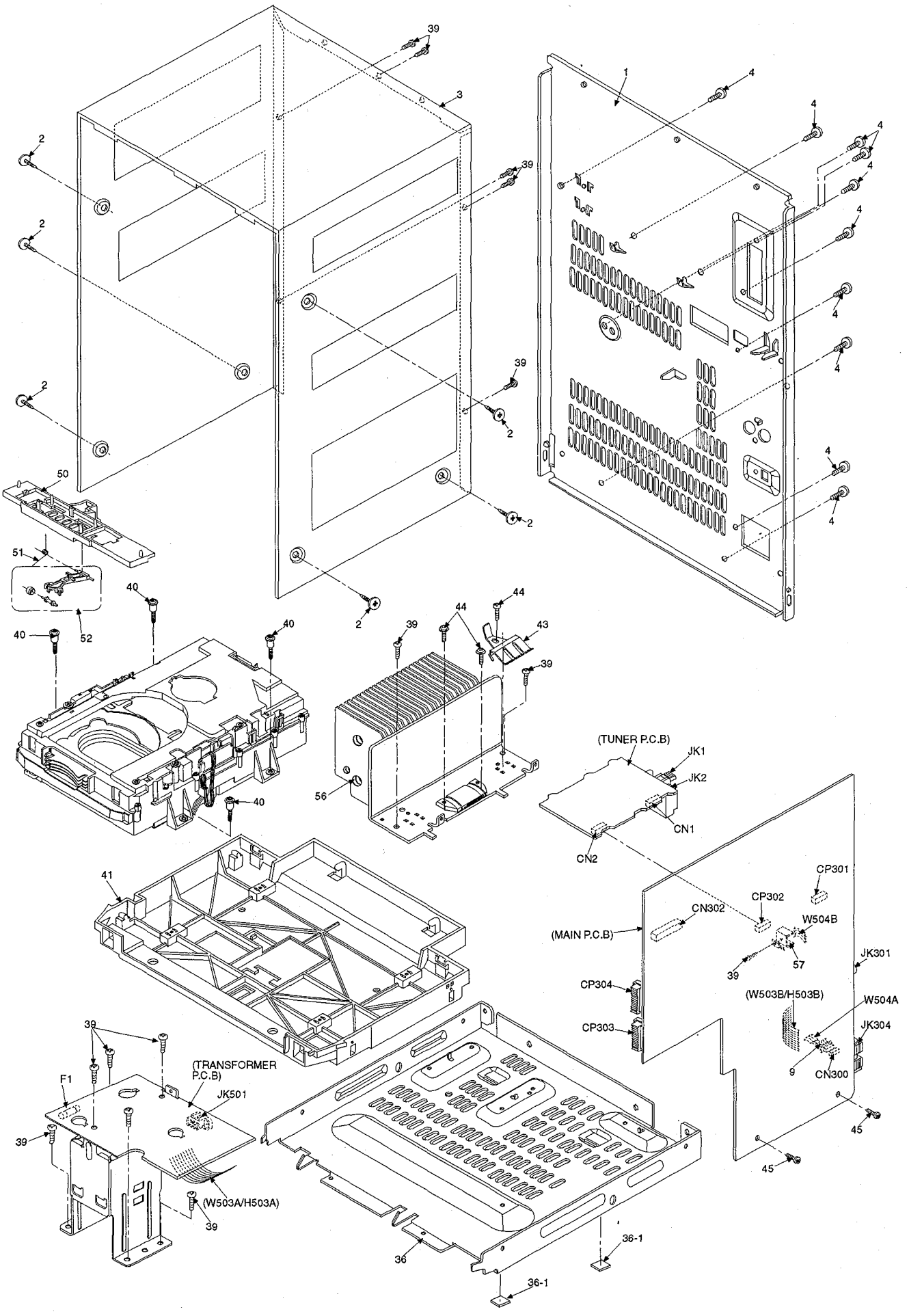


Note:
When changing the loading mechanism parts, apply the specified grease to the areas marked "xxx" as shown in the drawing.

Ref No.	Part No.
Ⓐ	RFKXPG671

■ Cabinet Parts Location




39
3
2
1
4
50
51
52
40
44
43
56
(TUNER P.C.B)
JK1
JK2
CN1
CN2
41
CP301
CP302
CN302
(MAIN P.C.B)
W504B
57
JK301
CP304
(W503B/H503B)
W504A
CP303
JK304
9
CN300
45
F1
(TRANSFORMER P.C.B)
JK501
(W503A/H503A)
36
36-1

■ Repalcement Parts List

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list .
* The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)
Parts without these indications can be used for all areas.
* [M] Indicates in the Remarks columns indicates parts supplied by **MESA.**
* [MBV] Indicates in the Remarks columns indicates parts supplied by **MBVIDEO.**
* Warning : This product uses a laser diode. Refer to caution statements on page 2.
ACHTUNG : • Die lasereinheit nicht zerlegen.
• Die lasereinheit darf nur gegen eine vom hertsteller spezifizierte einheit ausgetauscht werden.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RGRX0007C-B	REAR PANEL	[MBV](EB)
1	RGRX0007C-A	REAR PANEL	[MBV](EG)(E)
2	RHD03001-K	SCREW (TRANS)	[M]
3	RKMX0032-K	TOP CABINET	[M]
4	XTBS3+8JFZ1	SCREW	[M]
6	RDG0129-1	DAMPER GEAR	[M]
7	REEX0025	14P FFC	[M]
8	REEX0026	23P FFC	[M]
9	REXX0152	5 PIN PANEL TO MAIN	[M]
11	RGKX0018-S	CD LID	[M]
13	RFKGAK20EK	FRONT PANEL ASS'Y	[MBV]
13-1	RKA0059-K	LEG RUBBER	[M]
13-2	RKWX0091-K	CD WINDOW	[M]
13-3	RGKX0019-S	CD WINDOW ORNAMENT	[M]
13-4	RKWX0101-Q	DISC WINDOW	[M]
13-5	RKWX0090-Q	FL WINDOW	[M]
15	RGUX0179-K	DECK BOTTOM	[M]
16	RGUX0180-S	EQ BUTTON	[M]
17	RGUX0181-S	EQ BUTTON 2	[M]
18	RGUX0184-Q	FUNCTION BUTTON	[M]
19	RGUX0185-K	POWER BUTTON	[M]
20	RGUX0187-K	HIT CHART BUTTON	[M]
21	RGLX0006-Q	HITBUTTON DIFFUSER C	[M]
22	RGWX0027-K	VOLUME KNOB	[M]
23	RGUX0188-Q	DISC BUTTON	[M]
25	RFKLAAK40EBK	CASS. LID ASS'Y (R)	[M]
25-1	RKFX0052-K	CASSETTE LID (R)	[M]
25-2	RKWX0088-Q	CASSETTE LID WINDOW	[M]
25-3	RGKX0016-S	CASS. ORNAMENT R	[M]
26	RFKLAK20PBK	CASS. LID ASS'Y (L)	[M]
26-1	RKFX0053-K	CASSETTE LID (L)	[M]
26-2	RKWX0089-Q	CASSETTE LID WINDOW	[M]
26-3	RGKX0017-S	CASS. ORNAMENT L	[M]
27	RFKLACH330AK	CASS. HOLDER ASS'Y L	[M]
27-1	RUS757ZAA	CASSETTE HALF SPRING	[M]
28	RFKLACH330BK	CASS. HOLDER ASS'Y R	[M]
28-1	RUS757ZAA	CASSETTE HALF SPRING	[M]
29	RGUX0182-S	CONTROL BUTTON 2	[M]

Ref No.	Part No.	Part Name & Description	Remarks
30	RGUX0183-S	CONTROL BUTTON 1	[M]
33	RMB0446	CASS OPEN SPRING	[M]
34	RMBX0010	CD LID SPRING	[M]
36	RFKJAAK20-K	BOTTOM CHASSIS	[M]
36-1	RKA0059-K	LEG RUBBER	[M]
37	XTBS26+10J	SCREW	[M]
38	XTB3+10JFZ	REA PANEL SCREW	[M]
39	XTB3+8JFZ	SCREW	[M]
40	RHD30048	CD MECHANISM SCREW	[M]
41	RMKX0019	CD CHASSIS	[M]
43	RMC0238	TR HOLDER	[M]
44	XTW3+15T	POWER IC SCREW	[M]
45	XYE3+F10FN	PCB GROUND SCREW	[M]
47	RMNX0016	FL HOLDER	[M]
48	RSC0403	TUNER SHIELD PLATE	[M]
50	RMN0350	8 LED HOLDER	[M]
51	RME0221	HOLDER ARM SPRING	[M]
52	RFKNACH34PK	HOLDER ARM ASSEMBLY	[M]
55	RMR0909-X	DECK PCB SUPPORT	[M]
56	RXXX0007	HEAT SINK UNIT	[M]
57	RMYX0030	SUB HEAT SINK	[M]
		INTEGRATED CIRCUITS	
IC1	LA1832H	IC, IF/MPX	[M]
IC1	BA6418N	IC, DRIVER	[M]
IC2	LC7218	IC, PLL	[M]
IC101	M51167BFP-TB	IC, R/P	[M]
IC102	BA7755A	IC, SW	[M]
IC103	CXA1102M-T4	IC, DOLBY	[M]
IC104	BU4066BCF-E2	IC, ANALOG SW	[M]
IC105	BU2040F-E2	IC, I/O	[M]
IC301	BU4052BCF-E2	IC, ANALOG SW	[M]
IC302	BA4558FE2	IC, OP AMP	[M]
IC303	BH3854AFS-E2	IC, SOUND PROCESSOR	[M]
IC304	BA4558FE2	IC, OP AMP	[M]
IC305	RSN3502	IC, HIC	[M]⚠
IC306	BU2090F-E2	IC, IO EXPANDER	[M]
IC307	BA4558FE2	IC, OP AMP	[M]
IC310	AN78M05	IC, 5V REG	[M]⚠

Ref No.	Part No.	Part Name & Description	Remarks
IC701	AN8835SBE1	IC, SERVO AMP.	[M]
IC702	MN662741RPA	IC, DIGITAL LSI	[M]
IC703	AN8389SE1	IC, COIL/MOTOR DRIVE	[M]
IC800	BU2090F-E2	IC, IO EXPANDER	[M]
IC801	BU2090F-E2	IC, IO EXPANDER	[M]
IC803	M38197MA194F	IC, MICRO-COM	[M]
IC804	BA3835F-E2	IC, SPE ANA	[M]
IC951	0N2180RLC	IC,HALL	[M]
IC971	0N2180RLC	IC,HALL	[M]
		TRANSISTORS	
Q6	2SC2787LTA	TRANSISTOR	[M]
Q7	RVTDTA143XST	TRANSISTOR	[M]
Q8	2SC1740SSTA	TRANSISTOR	[M]
Q9	2SC1740SSTA	TRANSISTOR	[M]
Q10	2SC2785FETA	TRANSISTOR	[M]
Q11	2SC2785FETA	TRANSISTOR	[M]
Q12	2SC2787LTA	TRANSISTOR	[M]
Q101	2SJ164QRTA	TRANSISTOR	[M]
Q102	2SJ164QRTA	TRANSISTOR	[M]
Q103	2SJ164QRTA	TRANSISTOR	[M]
Q104	2SJ164QRTA	TRANSISTOR	[M]
Q107	BA1L4ZTA	TRANSISTOR	[M]
Q108	BA1L4ZTA	TRANSISTOR	[M]
Q115	2SD1020HTA	TRANSISTOR	[M]
Q116	2SD1020HTA	TRANSISTOR	[M]
Q117	BA1L4MTA	TRANSISTOR	[M]
Q118	2SC2785FTA	TRANSISTOR	[M]
Q119	2SC2785FTA	TRANSISTOR	[M]
Q120	2SC2785FTA	TRANSISTOR	[M]
Q121	2SC2785FTA	TRANSISTOR	[M]
Q151	BA1L4ZTA	TRANSISTOR	[M]
Q152	BA1L4ZTA	TRANSISTOR	[M]
Q153	2SC1740SLNET	TRANSISTOR	[M]
Q154	2SC1740SLNET	TRANSISTOR	[M]
Q171	2SD1302STA	TRANSISTOR	[M]
Q173	BA1L4ZTA	TRANSISTOR	[M]
Q174	2SC2785FTA	TRANSISTOR	[M]
Q175	2SD1302STA	TRANSISTOR	[M]

Ref No.	Part No.	Part Name & Description	Remarks
Q176	2SD1302STA	TRANSISTOR	[M]
Q179	2SC2784FTA	TRANSISTOR	[M]
Q203	2SD965RTA	TRANSISTOR	[M]
Q206	2SB621RTA	TRANSISTOR	[M]
Q207	2SB621RTA	TRANSISTOR	[M]
Q208	BA1A4ZTA	TRANSISTOR	[M]
Q209	BA1A4ZTA	TRANSISTOR	[M]
Q218	BN1A4MTA	TRANSISTOR	[M]
Q220	BN1L3NTA	TRANSISTOR	[M]
Q301	2SK301QTA	TRANSISTOR	[M]
Q303	2SD1450STA	TRANSISTOR	[M]
Q401	2SK301QTA	TRANSISTOR	[M]
Q403	2SD1450STA	TRANSISTOR	[M]
Q405	BN1A4MTA	TRANSISTOR	[M]
Q406	2SC2785FTA	TRANSISTOR	[M]
Q407	2SC2785FTA	TRANSISTOR	[M]
Q500	2SC2785FTA	TRANSISTOR	[M]
Q501	2SB621ARTA	TRANSISTOR	[M]⚠
Q502	2SA933SSTA	TRANSISTOR	[M]⚠
Q503	2SD2395E	TRANSISTOR	[M]⚠
Q504	2SB1566E	TRANSISTOR	[M]⚠
Q507	BA1L3ZTA	TRANSISTOR	[M]⚠
Q509	2SD2037ETA	TRANSISTOR	[M]⚠
Q510	2SD2037ETA	TRANSISTOR	[M]⚠
Q511	2SD2395E	TRANSISTOR	[M]⚠
Q512	2SB1566E	TRANSISTOR	[M]⚠
Q513	BA1A3QTA	TRANSISTOR	[M]
Q514	2SD467CTZ	TRANSISTOR	[M]⚠
Q515	2SD2037ETA	TRANSISTOR	[M]⚠
Q517	2SD2395E	TRANSISTOR	[M]⚠
Q525	BA1F4MTA	TRANSISTOR	[M]
Q526	2SD2395E	TRANSISTOR	[M]⚠
Q701	2SB709S	TRANSISTOR	[M]
Q800	2SC2785FTA	TRANSISTOR	[M]
Q803	2SC2785FTA	TRANSISTOR	[M]
Q804	BA1L4MTA	TRANSISTOR	[M]
Q806	2SC2785FTA	TRANSISTOR	[M]
Q807	2SC2785FTA	TRANSISTOR	[M]
Q808	BN1A4MTA	TRANSISTOR	[M]
		DIODES	
D4	MTZJ5R1CTA	DIODE	[M]
D5	1SS254TA	DIODE	[M]
D171	1SS254TA	DIODE	[M]
D172	MTZJ4R7BTA	DIODE	[M]
D173	1SS254TA	DIODE	[M]
D174	MTZJ3R6BTA	DIODE	[M]
D175	1SS254TA	DIODE	[M]

Ref No.	Part No.	Part Name & Description	Remarks
D201	1SS254TA	DIODE	[M]
D202	1SS254TA	DIODE	[M]
D300	MTZJ8R2BTA	DIODE	[M]
D301	1SS254TA	DIODE	[M]
D302	1SS254TA	DIODE	[M]
D305	1SS254TA	DIODE	[M]
D405	1SS254TA	DIODE	[M]
D406	1SS254TA	DIODE	[M]
D407	MTZJ12BTA	DIODE	[M]⚠
D408	1D3E	DIODE	[M]
D409	1SS254TA	DIODE	[M]
D410	1D3E	DIODE	[M]
D411	1SS254TA	DIODE	[M]
D412	1SS254TA	DIODE	[M]
D500	1N5402BM21	DIODE	[M]⚠
D501	1N5402BM21	DIODE	[M]⚠
D502	1N5402BM21	DIODE	[M]⚠
D503	1N5402BM21	DIODE	[M]⚠
D504	1D3E	DIODE	[M]
D505	1D3E	DIODE	[M]
D506	1D3E	DIODE	[M]
D507	1D3E	DIODE	[M]
D508	MTZJ12BTA	DIODE	[M]
D509	1D3E	DIODE	[M]
D510	1D3E	DIODE	[M]
D511	MTZJ5R1BTA	DIODE	[M]
D512	1D3E	DIODE	[M]
D513	1D3E	DIODE	[M]
D514	MA4330LTA	DIODE	[M]⚠
D515	MTZJ24DTA	DIODE	[M]⚠
D516	MTZJ15CTA	DIODE	[M]⚠
D517	MTZJ6R8ATA	DIODE	[M]
D518	1SS254TA	DIODE	[M]
D519	MTZJ8R2BTA	DIODE	[M]⚠
D520	1SS254TA	DIODE	[M]
D521	1SS254TA	DIODE	[M]
D522	MTZJ9R1BTA	DIODE	[M]
D524	MTZJ5R6BTA	DIODE	[M]⚠
D525	1SS254TA	DIODE	[M]
D526	1SS254TA	DIODE	[M]
D529	1SS254TA	DIODE	[M]
D532	MTZJ15CTA	DIODE	[M]
D803	SLR-325MC	DIODE	[M]
D804	1SS254TA	DIODE	[M]
D805	1SS254TA	DIODE	[M]
D808	1SS254TA	DIODE	[M]
D809	1SS254TA	DIODE	[M]
D810	SLR-325MC	DIODE	[M]
D811	1SS254TA	DIODE	[M]

Ref No.	Part No.	Part Name & Description	Remarks
D812	1SS254TA	DIODE	[M]
D814	1SS254TA	DIODE	[M]
D816	1SS254TA	DIODE	[M]
D820	SLR-325MC	DIODE	[M]
D822	1SS254TA	DIODE	[M]
D824	1SS254TA	DIODE	[M]
D825	1SS254TA	DIODE	[M]
D826	1SS254TA	DIODE	[M]
D827	1SS254TA	DIODE	[M]
D829	1SS254TA	DIODE	[M]
D830	1SS254TA	DIODE	[M]
D831	1SS254TA	DIODE	[M]
D832	1SS254TA	DIODE	[M]
D833	1SS254TA	DIODE	[M]
D834	1SS254TA	DIODE	[M]
D835	SPR505MDTT	DIODE	[M]
D836	SPR505MDTT	DIODE	[M]
D837	SPR505MDTT	DIODE	[M]
D838	SPR505MDTT	DIODE	[M]
D839	SPR505MDTT	DIODE	[M]
D840	1SS254TA	DIODE	[M]
D841	1SS254TA	DIODE	[M]
D843	1SS254TA	DIODE	[M]
D845	1SS254TA	DIODE	[M]
D846	1SS254TA	DIODE	[M]
D848	SLR-325MC	DIODE	[M]
D850	SLR325DCT31	DIODE	[M]
D851	SLR325DCT31	DIODE	[M]
D852	SLR325DCT31	DIODE	[M]
D857	1SS254TA	DIODE	[M]
D859	1SS254TA	DIODE	[M]
D860	1SS254TA	DIODE	[M]
D861	1SS254TA	DIODE	[M]
D862	1SS291TA	DIODE	[M]
D863	1SS291TA	DIODE	[M]
D864	1SS254TA	DIODE	[M]
D865	1SS254TA	DIODE	[M]
D866	1SS254TA	DIODE	[M]
D867	1SS254TA	DIODE	[M]
D868	1SS254TA	DIODE	[M]
D869	MTZJ5R6BTA	DIODE	[M]
D870	1SS254TA	DIODE	[M]
D871	1SS254TA	DIODE	[M]
D872	1SS254TA	DIODE	[M]
D873	1SS254TA	DIODE	[M]
D874	1SS291TA	DIODE	[M]
D951	MA165TA	DIODE	[M]
D971	MA165TA	DIODE	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		VARIABLE RESISTORS	
VR101	RRN6B05B24TA	VR, SEMIFIXED	[M]
VR102	RRN6B05B24TA	VR, SEMIFIXED	[M]
VR103	RRN6B05B24TA	VR, SEMIFIXED	[M]
VR104	RRN6B05B24TA	VR, SEMIFIXED	[M]
VR201	RRN6B05B73TA	VR, TAPE SPEED	[M]
VR802	EVQVBXFK124B	VR, VOL	[M]
		SWITCHES	
S1	RSH1A005	SW, LEAF	[M]
S2	RSH1A032-U	SW, MECHA	[M]
S3	RSH1A032-U	SW, MECHA	[M]
S4	RSH1A005	SW, LEAF	[M]
S5	RSH1A032-U	SW, MECHA	[M]
S701	RSM0006-P	SW, RESET	[M]
S800	EVQ21405R	SW, TAPE	[M]
S801	EVQ21405R	SW, REV PLAY/PAUSE	[M]
S802	EVQ21405R	SW, CD	[M]
S803	EVQ21405R	SW, DISC 5	[M]
S804	EVQ21405R	SW, DISC 4	[M]
S805	EVQ21405R	SW, DISC 3	[M]
S806	EVQ21405R	SW, DISC 2	[M]
S807	EVQ21405R	SW, DISC 1	[M]
S808	EVQ21405R	SW, POWER	[M]
S809	EVQ21405R	SW, TUNER	[M]
S810	EVQ21405R	SW, FWD PLAY	[M]
S811	EVQ21405R	SW, AUX	[M]
S812	EVQ21405R	SW, STOP	[M]
S813	EVQ21405R	SW, DISP/DEMO	[M]
S814	EVQ21405R	SW, FWD	[M]
S815	EVQ21405R	SW, CLK/TIMER	[M]
S816	EVQ21405R	SW, REW	[M]
S817	EVQ21405R	SW, TPLAY/REC	[M]
S818	EVQ21405R	SW, OPEN(DECK 1)	[M]
S822	EVQ21405R	SW, CHECK	[M]
S823	EVQ21405R	SW, OPEN/CLOSE	[M]
S824	EVQ21405R	SW, CD MANAGER	[M]
S825	EVQ21405R	SW, RANDOM	[M]
S826	EVQ21405R	SW, V.BASS	[M]
S827	EVQ21405R	SW, DOWN	[M]
S828	EVQ21405R	SW, TAPE EDIT	[M]
S829	EVQ21405R	SW, LEFT	[M]
S830	EVQ21405R	SW, REC	[M]
S835	EVQ21405R	SW, UP	[M]
S836	EVQ21405R	SW, DOLBY NR	[M]
S837	EVQ21405R	SW, RIGHT	[M]
S838	EVQ21405R	SW, REV MODE	[M]
S839	EVQ21405R	SW, EQ/SPACE	[M]
S840	EVQ21405R	SW, OPEN (DECK 2)	[M]
S951	RSH1A018-1U	SW,MODE DETECT	[M]
S952	RSH1A019-2U	SW,TAPE DETECT	[M]
S953	RSH1A019-2U	SW,Cr02 DETECT	[M]
S971	RSH1A018-1U	SW,MODE DETECT	[M]
S972	RSH1A019-2U	SW,TAPE DETECT	[M]
S973	RSH1A019-2U	SW,Cr02 DETECT	[M]
S974	RSH1A019-2U	SW,REC DETECT	[M]
S975	RSH1A019-2U	SW,REC DETECT	[M]
		CONNECTORS	
CN1	RJU063W07T	7P B-B CONNECTOR	[M]
CN1	RJS1A6714	CONNECTOR 14P	[M]
CN2	RJU063W07T	7P B-B CONNECTOR	[M]
CN201	RJS8T7ZA	8 PIN MOLEX	[M]
CN300	RJP5G18ZA	5P CONNECTOR	[M]
CN302	RJS1A5210	10 PINS WIRE HOLDER	[M]
CN701	RJU035T016-1	16 PIN FFC CONNECTOR	[M]
CN702	RJS1A6723-1Q	23 PIN FFC CONNECTOR	[M]
CN801	RJU071H11M	11P CPNNECTOR	[M]
CN802	RJS1A6223-1	23P CONNECTOR	[M]
CN803	RJS1A6214-1	14P FFC CONNECTOR	[M]
CP101	RJT071H09A	9P B-B PIN	[M]
CP102	RJT071H09A	9P B-B PIN	[M]
CP301	RJT063W07T	7P CONNECTOR	[M]
CP302	RJT063W07T	7P CONNECTOR	[M]
CP303	RJU077K20	20P B-B CONNECTOR	[M]
CP304	RJU077K20	20P B-B CONNECTOR	[M]
CP801	RJT071H11	11P B-B PIN	[M]
CP802	RJT077K20	20P B-B CONNECTOR	[M]
CP803	RJT077K20	20P B-B CONNECTOR	[M]
CS101	RJS1A6805	HEAD SOCKET	[M]
CS102	RJS1A6805	HEAD SOCKET	[M]
CS951	RJU071H09M1	9P CONNECTOR	[M]
CS971	RJU071H09M1	9P CONNECTOR	[M]
		COILS & TRANSFORMERS	
L3	RLQZPR47KT-Y	COIL	[M]
L4	ELEPKR68MA	COIL	[M]
L5	ELEPKR68MA	COIL	[M]
L6	ELELN822KL	RF CHOCK COIL	[M]
L7	ELELN822KL	RF CHOCK COIL	[M]
L8	RLQZP1R0KT-Y	AXIAL COIL	[M]
L9	SLM1B10-1M	A.B. FILTER	[M]
L201	RL08C002M-T	BIAS OSC COIL	[M]
L202	RLQZB470KT-D	RF CHOKE COIL	[M]
L300	SLQY07G-40	SP COIL	[M]
L400	SLQY07G-40	SP COIL	[M]
L800	RLQZP3R3KT-Y	COIL	[M]
T501	RTP1M3B010-X	POWER TRANSFORMER	[M]⚠
		COMPONENT COMBINATION	
Z1	RLA2Z002M-T	AM ANT OSC	[M]
Z2	RLI2Z006M-T	AM IFT	[M]
Z3	ENV17290G1R	FM TUNER PACK	[M]
Z101	EXBF7L355SYV	RADA RESISTOR	[M]
Z500	SLQZ650MH49	AC LINE COIL	[M]⚠
Z801	RCD12042TE	REMOTE CONT. SENSOR	[M]
Z971	EXBF7L355SYV	RADA RESISTOR	[M]
		CERAMIC FILTERS	
CF1	RLFFETNGA01L	(FM CF)	[M]
CF2	RLFFETNGA02L	(FM CF)	[M]
		OSCILLATORS	
X1	RSXZ456KM01	19KHZ OSC	[M]
X2	RLFDFT12DD	FM RESONATOR	[M]
X3	SVQ49U722T-S	7.2MHZ X'TAL	[M]
X701	RSXZ16M9M01T	CERAMIC OSC	[M]
X801	RSXD32K7S02	32.768HKZ X'TAL	[M]
X802	EF0EN6004T4	CERAMIC OSC	[M]
		RELAY	
RLY501	RSY0017M-0	RELAY	[M]
		DISPLAY TUBE	
FL800	RSL0232-F	FL DISPLAY	[M]
		FUSE PROTECTOR	
FP1	RSFMB40KT-L	FUSE PROTECTOR	[M]
FP2	RSFMB40KT-L	FUSE PROTECTOR	[M]
		FUSE	
F1	XBA2C12TB0	FUSE	[M]⚠
		FUSE CLIPS	
FC1	RJR0169T	FUSE HOLDER	[M]

Ref No.	Part No.	Part Name & Description	Remarks
FC2	RJR0169T	FUSE HOLDER	[M]
		JACKS	
JK1	RJH8201	ANTENNA TERMINAL	[M]
JK2	SJS208	LOOP ANT. TERMINAL	[M]
JK301	RJH2206	RCA JACK	[M]
JK304	RJH5407	SPEAKER TERMINAL	[M]
JK501	SJS9236	SOCKET	[M]⚠
JK802	RJJ37TK05-X	HP JACK	[M]
		CHIP JUMPERS	
RJ701	ERJ8GEY0R00A	0 1/8W	[M]

Ref No.	Part No.	Part Name & Description	Remarks
RJ702	ERJ8GEY0R00A	0 1/8W	[M]
RJ703	ERJ8GEY0R00A	0 1/8W	[M]
RJ704	ERJ8GEY0R00A	0 1/8W	[M]
RJ707	ERJ8GEY0R00A	0 1/8W	[M]
RJ709	ERJ8GEY0R00A	0 1/8W	[M]
RJ714	ERJ8GEY0R00A	0 1/8W	[M]
RJ715	ERJ8GEY0R00A	0 1/8W	[M]
RJ716	ERJ8GEY0R00A	0 1/8W	[M]
RJ717	ERJ8GEY0R00A	0 1/8W	[M]
RJ721	ERJ8GEY0R00A	0 1/8W	[M]
RJ722	ERJ8GEY0R00A	0 1/8W	[M]
RJ723	ERJ8GEY0R00A	0 1/8W	[M]
RJ724	ERJ8GEY0R00A	0 1/8W	[M]
RJ725	ERJ8GEY0R00A	0 1/8W	[M]

Ref No.	Part No.	Part Name & Description	Remarks
RJ726	ERJ8GEY0R00A	0 1/8W	[M]
RJ727	ERJ8GEY0R00A	0 1/8W	[M]
RJ728	ERJ8GEY0R00A	0 1/8W	[M]
RJ729	ERJ8GEY0R00A	0 1/8W	[M]
RJ730	ERJ8GEY0R00A	0 1/8W	[M]
		TEST JUMPERS	
TJ701	EYF8CU	TEST JUMPER	[M]
TJ702	EYF8CU	TEST JUMPER	[M]

■ Resistors & Capacitors

Notes :
* Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF), F=Farads.
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
* Bracketed indications in Values & Remarks columns specify the area (Refer to the first page for area). Parts without these indications can be used for all areas.
* [M] Indicates in the values & remarks column indicates parts supplied by **MESA**

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R15	ERDS2TJ181T	180 1/4W [M]
R16	ERDS2TJ153T	15K 1/4W [M]
R17	ERDS2TJ331T	330 1/4W [M]
R18	ERDS2TJ471T	470 1/4W [M]
R19	ERDS2TJ474T	470K 1/4W [M]
R20	ERDS2TJ562T	5.6K 1/4W [M]
R21	ERDS2TJ822T	8.2K 1/4W [M]
R22	ERDS2TJ473T	47K 1/4W [M]
R23	ERDS2TJ332T	3.3K 1/4W [M]
R24	ERDS2TJ472T	4.7K 1/4W [M]
R25	ERDS2TJ271T	270 1/4W [M]
R26	ERDS2TJ471T	470 1/4W [M]
R27	ERDS2TJ272T	2.7K 1/4W [M]
R28	ERDS2TJ473T	47K 1/4W [M]
R29	ERDS2TJ680T	68 1/4W [M]
R32	ERDS2TJ272T	2.7K 1/4W [M]
R33	ERDS2TJ272T	2.7K 1/4W [M]
R34	ERDS2TJ272T	2.7K 1/4W [M]
R35	ERDS2TJ272T	2.7K 1/4W [M]
R36	ERDS2TJ474T	470K 1/4W [M]
R37	ERDS2TJ474T	470K 1/4W [M]
R38	ERDS2TJ272T	2.7K 1/4W [M]
R39	ERDS2TJ272T	2.7K 1/4W [M]
R40	ERDS2TJ391T	390 1/4W [M]
R41	ERDS2TJ102T	1K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R42	ERDS2TJ102T	1K 1/4W [M]
R43	ERDS2TJ102T	1K 1/4W [M]
R44	ERDS2TJ102T	1K 1/4W [M]
R45	ERDS2TJ102T	1K 1/4W [M]
R46	ERDS2TJ104T	100K 1/4W [M]
R47	ERDS2TJ562T	5.6K 1/4W [M]
R48	ERDS2TJ391T	390 1/4W [M]
R49	ERDS2TJ561T	560 1/4W [M]
R50	ERDS2TJ102T	1K 1/4W [M]
R51	ERDS2TJ103T	10K 1/4W [M]
R52	ERDS2TJ102T	1K 1/4W [M]
R53	ERDS2TJ102T	1K 1/4W [M]
R54	ERDS2TJ102T	1K 1/4W [M]
R55	ERDS2TJ102T	1K 1/4W [M]
R56	ERDS2TJ102T	1K 1/4W [M]
R57	ERDS2TJ103T	10K 1/4W [M]
R58	ERDS2TJ103T	10K 1/4W [M]
R60	ERDS2TJ563T	56K 1/4W [M]
R61	ERDS2TJ102T	1K 1/4W [M]
R63	ERDS2TJ102T	1K 1/4W [M]
R64	ERDS2TJ820T	82 1/4W [M]
R65	ERDS2TJ103T	10K 1/4W [M]
R76	ERDS2TJ331T	330 1/4W [M]
R77	ERDS2TJ474T	470K 1/4W [M]
R101	ERDS2TJ334T	330K 1/4W [M]
R102	ERDS2TJ104T	100K 1/4W [M]
R103	ERDS2TJ153T	15K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R104	ERDS2TJ153T	15K 1/4W [M]
R105	ERDS2TJ271T	270 1/4W [M]
R106	ERDS2TJ222T	2.2K 1/4W [M]
R107	ERDS2TJ330T	33 1/4W [M]
R108	ERDS2TJ330T	33 1/4W [M]
R109	ERDS2TJ432T	4.3K 1/4W [M]
R110	ERDS2TJ432T	4.3K 1/4W [M]
R111	ERDS2TJ222T	2.2K 1/4W [M]
R112	ERDS2TJ222T	2.2K 1/4W [M]
R115	ERDS2TJ474T	470K 1/4W [M]
R116	ERDS2TJ474T	470K 1/4W [M]
R117	ERDS2TJ274T	270K 1/4W [M]
R118	ERDS2TJ274T	270K 1/4W [M]
R121	ERDS2TJ333T	33K 1/4W [M]
R122	ERDS2TJ333T	33K 1/4W [M]
R123	ERDS2TJ103T	10K 1/4W [M]
R124	ERDS2TJ103T	10K 1/4W [M]
R125	ERDS2TJ102T	1K 1/4W [M]
R126	ERDS2TJ102T	1K 1/4W [M]
R129	ERDS2TJ822T	8.2K 1/4W [M]
R130	ERDS2TJ822T	8.2K 1/4W [M]
R131	ERDS2TJ683T	68K 1/4W [M]
R132	ERDS2TJ335T	3.3M 1/4W [M]
R133	ERDS2TJ332T	3.3K 1/4W [M]
R134	ERDS2TJ474T	470K 1/4W [M]
R137	ERDS2TJ103T	10K 1/4W [M]
R138	ERDS2TJ103T	10K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R139	ERDS2TJ103T	10K 1/4W [M]
R141	ERDS2TJ682T	6.8K 1/4W [M]
R142	ERDS2TJ682T	6.8K 1/4W [M]
R143	ERDS2TJ222T	2.2K 1/4W [M]
R144	ERDS2TJ222T	2.2K 1/4W [M]
R145	ERDS2TJ103T	10K 1/4W [M]
R146	ERDS2TJ103T	10K 1/4W [M]
R149	ERDS2TJ272T	2.7K 1/4W [M]
R150	ERDS2TJ272T	2.7K 1/4W [M]
R151	ERDS2TJ105T	1M 1/4W [M]
R152	ERDS2TJ105T	1M 1/4W [M]
R153	ERDS2TJ102T	1K 1/4W [M]
R154	ERDS2TJ102T	1K 1/4W [M]
R155	ERDS2TJ681T	680 1/4W [M]
R156	ERDS2TJ681T	680 1/4W [M]
R158	ERDS2TJ221T	220 1/4W [M]
R159	ERDS2TJ222T	2.2K 1/4W [M]
R160	ERDS2TJ222T	2.2K 1/4W [M]
R161	ERDS2TJ472T	4.7K 1/4W [M]
R162	ERDS2TJ472T	4.7K 1/4W [M]
R163	ERDS2TJ433T	43K 1/4W [M]
R165	ERDS2TJ563T	56K 1/4W [M]
R166	ERDS2TJ104T	100K 1/4W [M]
R167	ERDS2TJ470T	47 1/4W [M]
R170	ERDS2TJ102T	1K 1/4W [M]
R172	ERDS2TJ331T	330 1/4W [M]
R173	ERDS2TJ103T	10K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R174	ERDS2TJ103T	10K 1/4W [M]
R176	ERDS2TJ822T	8.2K 1/4W [M]
R177	ERDS2TJ472T	4.7K 1/4W [M]
R178	ERDS2TJ1R2T	1.2 1/4W [M]
R179	ERDS2TJ472T	4.7K 1/4W [M]
R180	ERDS2TJ472T	4.7K 1/4W [M]
R181	ERDS2TJ332T	3.3K 1/4W [M]
R182	ERDS2TJ1R0T	1 1/4W [M]
R183	ERDS2TJ104T	100K 1/4W [M]
R184	ERDS2TJ104T	100K 1/4W [M]
R185	ERDS2TJ104T	100K 1/4W [M]
R186	ERDS2TJ102T	1K 1/4W [M]
R188	ERDS2TJ102T	1K 1/4W [M]
R189	ERDS2TJ472T	4.7K 1/4W [M]
R190	ERDS2TJ104T	100K 1/4W [M]
R191	ERDS2TJ563T	56K 1/4W [M]
R192	ERDS2TJ470T	47 1/4W [M]
R193	ERDS2TJ104T	100K 1/4W [M]
R194	ERDS2TJ104T	100K 1/4W [M]
R195	ERDS2TJ104T	100K 1/4W [M]
R206	ERDS2TJ221T	220 1/4W [M]
R208	ERDS2TJ103T	10K 1/4W [M]
R209	ERDS2TJ332T	3.3K 1/4W [M]
R213	ERDS2TJ152T	1.5K 1/4W [M]
R215	ERDS2TJ222T	2.2K 1/4W [M]
R216	ERDS2TJ222T	2.2K 1/4W [M]
R220	ERDS2TJ472T	4.7K 1/4W [M]
R221	ERDS2TJ2R7T	2.7 1/4W [M]
R225	ERDS2TJ2R7T	2.7 1/4W [M]
R226	ERDS2TJ102T	1K 1/4W [M]
R227	ERDS2TJ102T	1K 1/4W [M]
R228	ERDS2TJ472T	4.7K 1/4W [M]
R229	ERDS2TJ103T	10K 1/4W [M]
R230	ERDS2TJ472T	4.7K 1/4W [M]
R232	ERDS2TJ102T	1K 1/4W [M]
R233	ERDS2TJ222T	2.2K 1/4W [M]
R234	ERDS2TJ472T	4.7K 1/4W [M]
R235	ERDS2TJ472T	4.7K 1/4W [M]
R236	ERDS2TJ472T	4.7K 1/4W [M]
R300	ERDS2TJ473T	47K 1/4W [M]
R301	ERDS2TJ103T	10K 1/4W [M]
R302	ERDS2TJ563T	56K 1/4W [M]
R304	ERDS2TJ222T	2.2K 1/4W [M]
R305	ERDS2TJ223T	22K 1/4W [M]
R306	ERDS2TJ103T	10K 1/4W [M]
R307	ERDS2TJ153T	15K 1/4W [M]
R308	ERDS2TJ104T	100K 1/4W [M]
R309	ERDS2TJ752T	7.5K 1/4W [M]
R310	ERDS2TJ333T	33K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R312	ERDS2TJ333T	33K 1/4W [M]
R313	ERDS2TJ822T	8.2K 1/4W [M]
R314	ERDS2TJ272T	2.7K 1/4W [M]
R315	ERDS2TJ561T	560 1/4W [M]
R320	ERDS2TJ154T	150K 1/4W [M]
R321	ERDS2TJ472T	4.7K 1/4W [M]
R322	ERDS2TJ152T	1.5K 1/4W [M]
R323	ERDS2TJ153T	15K 1/4W [M]
R324	ERDS2TJ102T	1K 1/4W [M]
R325	ERDS2TJ104T	100K 1/4W [M]
R326	ERDS2TJ102T	1K 1/4W [M]
R327	ERDS2TJ683T	68K 1/4W [M]
R328	ERDS2TJ392T	3.9K 1/4W [M]
R329	ERDS2TJ683T	68K 1/4W [M]
R330	ERDS1FVJ100T	10 1/2W ⚠ [M]
R331	ERDS2TJ823T	82K 1/4W [M]
R332	ERDS2TJ681T	680 1/4W [M]
R333	ERDS2TJ563T	56K 1/4W [M]
R334	ERDS2TJ103T	10K 1/4W [M]
R335	ERDS2TJ681T	680 1/4W [M]
R336	ERDS2TJ681T	680 1/4W [M]
R338	ERDS2TJ100T	10 1/4W [M]
R339	ERDS2TJ184T	180K 1/4W [M]
R375	ERDS2TJ223T	22K 1/4W [M]
R392	ERDS2TJ154T	150K 1/4W [M]
R400	ERDS2TJ473T	47K 1/4W [M]
R401	ERDS2TJ103T	10K 1/4W [M]
R402	ERDS2TJ563T	56K 1/4W [M]
R404	ERDS2TJ222T	2.2K 1/4W [M]
R405	ERDS2TJ223T	22K 1/4W [M]
R406	ERDS2TJ103T	10K 1/4W [M]
R407	ERDS2TJ153T	15K 1/4W [M]
R408	ERDS2TJ104T	100K 1/4W [M]
R409	ERDS2TJ752T	7.5K 1/4W [M]
R410	ERDS2TJ333T	33K 1/4W [M]
R412	ERDS2TJ333T	33K 1/4W [M]
R413	ERDS2TJ822T	8.2K 1/4W [M]
R414	ERDS2TJ272T	2.7K 1/4W [M]
R415	ERDS2TJ561T	560 1/4W [M]
R420	ERDS2TJ154T	150K 1/4W [M]
R421	ERDS2TJ472T	4.7K 1/4W [M]
R422	ERDS2TJ152T	1.5K 1/4W [M]
R423	ERDS2TJ153T	15K 1/4W [M]
R424	ERDS2TJ102T	1K 1/4W [M]
R425	ERDS2TJ104T	100K 1/4W [M]
R426	ERDS2TJ102T	1K 1/4W [M]
R427	ERDS2TJ683T	68K 1/4W [M]
R428	ERDS2TJ392T	3.9K 1/4W [M]
R429	ERDS2TJ683T	68K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R430	ERDS1FVJ100T	10 1/2W ⚠ [M]
R431	ERDS2TJ124T	120K 1/4W [M]
R432	ERDS2TJ681T	680 1/4W [M]
R433	ERDS2TJ563T	56K 1/4W [M]
R434	ERDS2TJ103T	10K 1/4W [M]
R435	ERDS2TJ681T	680 1/4W [M]
R436	ERDS2TJ681T	680 1/4W [M]
R438	ERDS2TJ100T	10 1/4W [M]
R439	ERDS2TJ184T	180K 1/4W [M]
R450	ERDS2TJ272T	2.7K 1/4W [M]
R451	ERDS2TJ152T	1.5K 1/4W [M]
R452	ERDS2TJ272T	2.7K 1/4W [M]
R453	ERDS2TJ104T	100K 1/4W [M]
R454	ERDS2TJ104T	100K 1/4W [M]
R455	ERDS2TJ122T	1.2K 1/4W [M]
R456	ERDS2TJ272T	2.7K 1/4W [M]
R457	ERDS2TJ472T	4.7K 1/4W [M]
R458	ERDS2TJ103T	10K 1/4W [M]
R460	ERDS2TJ682T	6.8K 1/4W [M]
R461	ERDS2TJ102T	1K 1/4W [M]
R462	ERDS2TJ102T	1K 1/4W [M]
R468	ERDS2TJ334T	330K 1/4W [M]
R469	ERDS2TJ334T	330K 1/4W [M]
R470	ERDS2TJ221T	220 1/4W [M]
R471	ERDS2TJ473T	47K 1/4W [M]
R472	ERDS2TJ105T	1M 1/4W [M]
R473	ERDS2TJ474T	470K 1/4W [M]
R474	ERDS2TJ105T	1M 1/4W [M]
R475	ERDS2TJ334T	330K 1/4W [M]
R476	ERD2FCVG470T	47 1/4W [M]
R477	ERDS2TJ103T	10K 1/4W [M]
R478	ERDS2TJ563T	56K 1/4W [M]
R479	ERDS2TJ563T	56K 1/4W [M]
R480	ERDS2TJ562T	5.6K 1/4W [M]
R481	ERDS2TJ562T	5.6K 1/4W [M]
R483	ERDS2TJ222T	2.2K 1/4W [M]
R484	ERDS2TJ334T	330K 1/4W [M]
R485	ERDS2TJ472T	4.7K 1/4W [M]
R488	ERDS2TJ1R0T	1 1/4W [M]
R489	ERDS2TJ1R0T	1 1/4W [M]
R490	ERDS2TJ151T	150 1/4W [M]
R492	ERDS2TJ154T	150K 1/4W [M]
R500	ERDS1FVJ560T	56 1/2W ⚠ [M]
R501	ERDS2TJ472T	4.7K 1/4W [M]
R504	ERDS2TJ103T	10K 1/4W [M]
R505	ERD25FVJ4R7T	4.7 1/4W [M]
R506	ERDS2TJ472T	4.7K 1/4W [M]
R507	ERDS2TJ151T	150 1/4W [M]
R508	ERDS1FVJ102T	1K 1/2W ⚠ [M]

Ref. No.	Part No.	Values & Remarks
R509	ERG1SJ332E	3.3K 1W ⚠ [M]
R510	ERG1SJ332E	3.3K 1W ⚠ [M]
R511	ERDS1FVJ2R2T	2.2 1/2W ⚠ [M]
R512	ERDS1FVJ102T	1K 1/2W ⚠ [M]
R513	ERDS1FVJ102T	1K 1/2W ⚠ [M]
R514	ERDS2TJ151T	150 1/4W [M]
R515	ERDS1FVJ102T	1K 1/2W ⚠ [M]
R516	ERDS2TJ151T	150 1/4W [M]
R517	ERDS2TJ151T	150 1/4W [M]
R518	ERDS1FVJ270T	27 1/2W ⚠ [M]
R519	ERDS1FVJ270T	27 1/2W [M]
R520	ERDS1FVJ270T	27 1/2W ⚠ [M]
R521	ERDS1FVJ270T	27 1/2W ⚠ [M]
R522	ERDS2TJ122T	1.2K 1/4W [M]
R523	ERDS2TJ151T	150 1/4W [M]
R524	ERDS1FVJ4R7T	4.7 1/2W ⚠ [M]
R525	ERDS2TJ223T	22K 1/4W [M]
R526	ERDS2TJ273T	27K 1/4W [M]
R530	ERDS2TJ180T	18 1/4W [M]
R531	ERDS1FVJ330T	33 1/2W ⚠ [M]
R532	ERDS2TJ821T	820 1/4W [M]
R536	ERDS2TJ152T	1.5K 1/4W [M]
R537	ERDS2TJ151T	150 1/4W [M]
R538	ERDS2TJ391T	390 1/4W [M]
R540	ERDS2TJ272T	2.7K 1/4W [M]
R541	ERDS2TJ1R0T	1 1/4W [M]
R542	ERDS2TJ331T	330 1/4W [M]
R543	ERDS2TJ1R0T	1 1/4W [M]
R552	ERDS1FVJ560T	56 1/2W ⚠ [M]
R553	ERDS1FVJ2R2T	2.2 1/2W ⚠ [M]
R554	ERDS1FVJ2R2T	2.2 1/2W ⚠ [M]
R555	ERDS1FVJ2R2T	2.2 1/2W ⚠ [M]
R564	ERDS1FVJ6R8T	6.8 1/2W ⚠ [M]
R565	ERDS1FVJ1R0T	1 1/2W ⚠ [M]
R566	ERDS2TJ1R2T	1.2 1/4W [M]
R567	ERDS2TJ103T	10K 1/4W [M]
R568	ERDS2TJ103T	10K 1/4W [M]
R569	ERDS2TJ1R0T	1 1/4W [M]
R570	ERDS2TJ222T	2.2K 1/4W [M]
R571	ERDS2TJ151T	150 1/4W [M]
R581	ERDS1FVJ560T	56 1/2W ⚠ [M]
R582	ERDS1FVJ2R2T	2.2 1/2W ⚠ [M]
R583	ERDS1FVJ122T	1.2K 1/2W ⚠ [M]
R584	ERDS2TJ151T	150 1/4W [M]
R585	ERX1ANJP5R6	5.6 1W ⚠ [M]
R701	ERJ6GEYJ4R7V	4.7 1/10W [M]
R703	ERJ6GEYJ823	82K 1/10W [M]
R704	ERJ6GEYJ102V	1K 1/10W [M]
R705	ERJ6GEYJ103V	10K 1/10W [M]

Ref. No.	Part No.	Values & Remarks
R706	ERJ6GEYJ102V	1K 1/10W [M]
R707	ERJ6GEYJ474V	470K 1/10W [M]
R708	ERJ6GEYJ154V	150K 1/10W [M]
R709	ERJ6GEYJ683V	68K 1/10W [M]
R711	ERJ6GEYJ154V	150K 1/10W [M]
R712	ERJ6GEYJ221V	220 1/10W [M]
R717	ERJ6GEYJ102V	1K 1/10W [M]
R718	ERJ6GEYJ102V	1K 1/10W [M]
R719	ERJ6GEYJ102V	1K 1/10W [M]
R720	ERJ6GEYJ102V	1K 1/10W [M]
R721	ERJ6GEYJ101V	100 1/10W [M]
R722	ERJ6GEYJ563V	56K 1/10W [M]
R723	ERJ6GEYJ182V	1.8K 1/10W [M]
R724	ERJ6GEYJ333V	33K 1/10W [M]
R725	ERJ6GEYJ472V	4.7K 1/10W [M]
R726	ERJ6GEYJ473V	47K 1/10W [M]
R727	ERJ6GEYJ822V	8.2K 1/10W [M]
R728	ERJ6GEYJ103V	10K 1/10W [M]
R731	ERJ6GEYJ822V	8.2K 1/10W [M]
R734	ERJ6GEYJ101V	100 1/10W [M]
R735	ERJ6GEYJ101V	100 1/10W [M]
R736	ERJ6GEYJ101V	100 1/10W [M]
R738	ERJ6GEYJ223V	22K 1/10W [M]
R741	ERJ6GEYJ562V	5.6K 1/10W [M]
R742	ERJ6GEYJ562V	5.6K 1/10W [M]
R743	ERJ6GEYJ562V	5.6K 1/10W [M]
R744	ERJ6GEYJ103V	10K 1/10W [M]
R745	ERJ6GEYJ155V	1.5M 1/10W [M]
R748	ERJ6GEYJ182V	1.8K 1/10W [M]
R749	ERJ6GEYJ682V	6.8K 1/10W [M]
R750	ERJ6GEYJ473V	47K 1/10W [M]
R751	ERJ6GEYJ473V	47K 1/10W [M]
R752	ERJ8GEYJ220V	22 1/8W [M]
R770	ERJ6GEYJ155V	1.5M 1/10W [M]
R771	ERJ6GEYJ155V	1.5M 1/10W [M]
R772	ERJ6GEYJ273V	27K 1/10W [M]
R802	ERDS2TJ683T	68K 1/4W [M]
R803	ERDS2TJ222T	2.2K 1/4W [M]
R804	ERDS2TJ182T	1.8K 1/4W [M]
R805	ERDS2TJ122T	1.2K 1/4W [M]
R806	ERDS2TJ102T	1K 1/4W [M]
R807	ERDS2TJ102T	1K 1/4W [M]
R808	ERDS2TJ271T	270 1/4W [M]
R809	ERDS2TJ223T	22K 1/4W [M]
R810	ERDS2TJ223T	22K 1/4W [M]
R811	ERDS2TJ103T	10K 1/4W [M]
R812	ERDS2TJ103T	10K 1/4W [M]
R815	ERDS2TJ271T	270 1/4W [M]
R816	ERDS2TJ682T	6.8K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R817	ERDS2TJ682T	6.8K 1/4W [M]
R819	ERDS2TJ472T	4.7K 1/4W [M]
R820	ERDS2TJ472T	4.7K 1/4W [M]
R823	ERDS2TJ272T	2.7K 1/4W [M]
R824	ERDS2TJ272T	2.7K 1/4W [M]
R825	ERDS2TJ271T	270 1/4W [M]
R830	ERDS2TJ182T	1.8K 1/4W [M]
R831	ERDS2TJ122T	1.2K 1/4W [M]
R832	ERDS2TJ102T	1K 1/4W [M]
R833	ERDS2TJ102T	1K 1/4W [M]
R834	ERDS2TJ222T	2.2K 1/4W [M]
R835	ERDS2TJ222T	2.2K 1/4W [M]
R837	ERDS2TJ182T	1.8K 1/4W [M]
R838	ERDS2TJ182T	1.8K 1/4W [M]
R840	ERDS2TJ122T	1.2K 1/4W [M]
R841	ERDS2TJ122T	1.2K 1/4W [M]
R845	ERDS2TJ102T	1K 1/4W [M]
R846	ERDS2TJ102T	1K 1/4W [M]
R847	ERDS2TJ820T	82 1/4W [M]
R848	ERDS2TJ820T	82 1/4W [M]
R849	ERDS2TJ102T	1K 1/4W [M]
R850	ERDS2TJ102T	1K 1/4W [M]
R852	ERDS2TJ820T	82 1/4W [M]
R853	ERDS2TJ820T	82 1/4W [M]
R855	ERDS2TJ331T	330 1/4W [M]
R856	ERDS2TJ391T	390 1/4W [M]
R857	ERDS2TJ331T	330 1/4W [M]
R858	ERDS2TJ391T	390 1/4W [M]
R859	ERDS2TJ331T	330 1/4W [M]
R860	ERDS2TJ391T	390 1/4W [M]
R861	ERDS2TJ331T	330 1/4W [M]
R862	ERDS2TJ391T	390 1/4W [M]
R863	ERDS2TJ331T	330 1/4W [M]
R864	ERDS2TJ391T	390 1/4W [M]
R865	ERDS2TJ820T	82 1/4W [M]
R866	ERDS2TJ820T	82 1/4W [M]
R867	ERDS2TJ820T	82 1/4W [M]
R868	ERDS2TJ820T	82 1/4W [M]
R869	ERDS2TJ102T	1K 1/4W [M]
R870	ERDS2TJ102T	1K 1/4W [M]
R871	ERDS2TJ102T	1K 1/4W [M]
R872	ERDS2TJ221T	220 1/4W [M]
R873	ERDS2TJ102T	1K 1/4W [M]
R874	ERDS2TJ221T	220 1/4W [M]
R875	ERDS2TJ473T	47K 1/4W [M]
R876	ERDS2TJ103T	10K 1/4W [M]
R877	ERDS2TJ473T	47K 1/4W [M]
R878	ERDS2TJ103T	10K 1/4W [M]
R879	ERDS2TJ103T	10K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R880	ERDS2TJ101T	100 1/4W [M]
R881	ERDS2TJ101T	100 1/4W [M]
R882	ERDS2TJ101T	100 1/4W [M]
R883	ERDS2TJ101T	100 1/4W [M]
R884	ERDS2TJ103T	10K 1/4W [M]
R885	ERDS2TJ223T	22K 1/4W [M]
R886	ERDS2TJ331T	330 1/4W [M]
R887	ERDS2TJ104T	100K 1/4W [M]
R888	ERDS2TJ104T	100K 1/4W [M]
R889	ERDS2TJ104T	100K 1/4W [M]
R890	ERDS2TJ104T	100K 1/4W [M]
R891	ERDS2TJ104T	100K 1/4W [M]
R893	ERDS2TJ104T	100K 1/4W [M]
R894	ERDS2TJ104T	100K 1/4W [M]
R895	ERDS2TJ104T	100K 1/4W [M]
R896	ERDS2TJ473T	47K 1/4W [M]
R898	ERDS2TJ104T	100K 1/4W [M]
R901	ERDS2TJ103T	10K 1/4W [M]
R910	ERDS2TJ104T	100K 1/4W [M]
R911	ERDS2TJ561T	560 1/4W [M]
R914	ERDS2TJ104T	100K 1/4W [M]
R915	ERDS2TJ103T	10K 1/4W [M]
R916	ERDS2TJ103T	10K 1/4W [M]
R923	ERDS2TJ104T	100K 1/4W [M]
R925	ERDS2TJ473T	47K 1/4W [M]
R928	ERDS2TJ681T	680 1/4W [M]
R929	ERDS2TJ106T	10M 1/4W [M]
R931	ERDS2TJ334T	330K 1/4W [M]
R935	ERDS2TJ102T	1K 1/4W [M]
R936	ERDS2TJ101T	100 1/4W [M]
R937	ERDS2TJ101T	100 1/4W [M]
R938	ERDS2TJ103T	10K 1/4W [M]
R939	ERDS2TJ103T	10K 1/4W [M]
R940	ERDS2TJ473T	47K 1/4W [M]
R941	ERDS2TJ473T	47K 1/4W [M]
R942	ERDS2TJ103T	10K 1/4W [M]
R943	ERDS2TJ103T	10K 1/4W [M]
R944	ERDS2TJ472T	4.7K 1/4W [M]
R945	ERDS2TJ104T	100K 1/4W [M]
R946	ERDS2TJ102T	1K 1/4W [M]
R947	ERDS2TJ104T	100K 1/4W [M]
R948	ERDS2TJ472T	4.7K 1/4W [M]
R949	ERDS2TJ104T	100K 1/4W [M]
R950	ERDS2TJ104T	100K 1/4W [M]
R952	ERDS2TJ821T	820 1/4W [M]
R953	ERDS2TJ103T	10K 1/4W [M]
R953	ERDS2TJ393T	39K 1/4W [M]
R956	ERDS2TJ223T	22K 1/4W [M]
R957	ERDS2TJ223T	22K 1/4W [M]

Ref. No.	Part No.	Values & Remarks
R959	ERDS2TJ123T	12K 1/4W [M]
R960	ERDS2TJ472T	4.7K 1/4W [M]
R963	ERDS2TJ472T	4.7K 1/4W [M]
R964	ERDS2TJ223T	22K 1/4W [M]
R965	ERDS2TJ223T	22K 1/4W [M]
R966	ERDS2TJ123T	12K 1/4W [M]
R970	ERDS2TJ103T	10K 1/4W [M]
R971	ERDS2TJ222T	2.2K 1/4W [M]
R972	ERDS2TJ102T	1K 1/4W [M]
R972	ERDS2TJ821T	820 1/4W [M]
R973	ERDS2TJ331T	330 1/4W [M]
R973	ERDS2TJ393T	39K 1/4W [M]
		CAPACITORS
C1	ECA1AKF820E	82 10V [M]
C15	ECBT1C103MS5	0.01 16V [M]
C16	ECEA1CU220B	22 16V [M]
C17	ECBT1C103MS5	0.01 16V [M]
C18	ECBT1H102KB5	1000P 50V [M]
C19	ECBT1C103MS5	0.01 16V [M]
C20	ECEA1HKA3R3B	3.3 50V [M]
C21	ECEA0JU101B	100 6.3V [M]
C22	ECBT1C103MS5	0.01 16V [M]
C23	ECEA1CU220B	22 16V [M]
C24	ECBT1H473ZF5	0.047 50V [M]
C25	ECEA1HKA4R7B	4.7 50V [M]
C26	ECBT1C822MS5	8200P 16V [M]
C27	ECQP1821JZT	820P 100V [M]
C28	ECEA1HKA010B	1 50V [M]
C29	ECFR1C103KR	0.01 100V [M]
C30	ECFR1C103KR	0.01 100V [M]
C31	ECBT1H150JC5	15P 50V [M]
C32	ECBT1C103MS5	0.01 16V [M]
C33	ECEA1HKA2R2B	2.2 50V [M]
C34	ECEA1HKA010B	1 50V [M]
C35	ECEA1HKA010B	1 50V [M]
C36	ECEA1HKA010B	1 50V [M]
C37	ECEA1HKA010B	1 50V [M]
C38	ECBT1C103MS5	0.01 16V [M]
C39	ECBT1C103MS5	0.01 16V [M]
C40	ECBT1H561KB5	560P 50V [M]
C41	ECBT1H561KB5	560P 50V [M]
C42	ECBT1C682MR5	6800P 16V [M]
C43	ECBT1C682MR5	6800P 16V [M]
C44	ECEA1CU101B	100 16V [M]
C45	ECEA1HKA010B	1 50V [M]
C46	ECEA1HKA010B	1 50V [M]
C47	ECBT1H473ZF5	0.047 50V [M]

Ref. No.	Part No.	Values & Remarks
C48	ECBT1H8R2KC5	8.2P 50V [M]
C49	ECBT1H331KB5	330P 50V [M]
C51	ECBT1C103MS5	0.01 16V [M]
C52	ECEA25M4R7B	4.7 25V [M]
C53	ECBT1C103MS5	0.01 16V [M]
C54	ECBT1H180JC5	18P 50V [M]
C55	ECBT1H150JC5	15P 50V [M]
C56	ECBT1H102KB5	1000P 50V [M]
C57	ECEA0JU101B	100 6.3V [M]
C59	ECBT1H330J5	33P 50V [M]
C60	ECBT1H102KB5	1000P 50V [M]
C61	ECBT1H331KB5	330P 50V [M]
C62	ECEA1CU220B	22 16V [M]
C63	ECBT1C103MS5	0.01 16V [M]
C64	ECBT1C103MS5	0.01 16V [M]
C65	ECBT1H102KB5	1000P 50V [M]
C66	ECBT1H102KB5	1000P 50V [M]
C67	ECBT1H102KB5	1000P 50V [M]
C68	ECBT1H102KB5	1000P 50V [M]
C71	ECBT1C103MS5	0.01 16V [M]
C72	ECBT1H471KB5	470P 50V [M]
C73	ECBT1H2R7KC5	2.7P 50V [M]
C101	ECBT1H102KB5	1000P 50V [M]
C102	ECBT1H102KB5	1000P 50V [M]
C103	ECBT1H681KB5	680P 50V [M]
C104	ECFR1C223MR	0.022 16V [M]
C105	ECBT1H681KB5	680P 50V [M]
C106	ECBT1H681KB5	680P 50V [M]
C108	ECEA1CKA330B	33 16V [M]
C109	ECEA1CKA101B	100 16V [M]
C111	ECBT1H561KB5	560P 50V [M]
C112	ECBT1H561KB5	560P 50V [M]
C113	ECEA0JKA221B	220 6.3V [M]
C114	ECEA0JKA221B	220 6.3V [M]
C115	ECFR1C333JR	0.033 16V [M]
C116	ECFR1C333JR	0.033 16V [M]
C117	ECEA1HKA010B	1 50V [M]
C118	ECEA1HKA010B	1 50V [M]
C119	ECEA1HKA4R7B	4.7 50V [M]
C120	ECEA1HKA4R7B	4.7 50V [M]
C121	ECEA1HKA010B	1 50V [M]
C122	ECEA1HKA010B	1 50V [M]
C123	ECBT1H102KB5	1000P 50V [M]
C124	ECBT1H102KB5	1000P 50V [M]
C125	ECFR1C473MR	0.047 16V [M]
C126	ECFR1C473MR	0.047 16V [M]
C127	ECBT1C103MS5	0.01 16V [M]
C128	ECBT1C103MS5	0.01 16V [M]
C129	ECBT1H821KB5	820P 50V [M]
C130	ECBT1H821KB5	820P 50V [M]
C131	ECBT1H821KB5	820P 50V [M]
C132	ECBT1H821KB5	820P 50V [M]
C133	ECEA1HKA4R7B	4.7 50V [M]
C134	ECEA1HKA4R7B	4.7 50V [M]
C135	ECBT1H102KB5	1000P 50V [M]
C136	ECBT1H102KB5	1000P 50V [M]
C139	ECEA1HKA2R2B	2.2 50V [M]
C140	ECEA1CKA100B	10 16V [M]
C141	ECEA1HKA0R1B	0.1 50V [M]
C142	ECFR1C223MR	0.022 16V [M]
C143	ECEA1HKA4R7B	4.7 50V [M]
C144	ECEA1HKA4R7B	4.7 50V [M]
C145	ECEA1CKA100B	10 16V [M]
C146	ECEA1CKA100B	10 16V [M]
C147	ECBT1C152KR5	1500P 16V [M]
C148	ECBT1C152KR5	1500P 16V [M]
C150	ECEA1AKA470B	47 10V [M]
C151	ECEA1HKA010B	1 50V [M]
C152	ECEA1HKA010B	1 50V [M]
C153	ECBT1H102KB5	1000P 50V [M]
C154	ECBT1H102KB5	1000P 50V [M]
C155	ECEA1CKA100B	10 16V [M]
C156	ECEA1CKA100B	10 16V [M]
C161	ECEA1CKA101B	100 16V [M]
C162	ECEA1CU471B	470 16V [M]
C163	ECEA1HKA010B	1 50V [M]
C164	ECEA1HKA010B	1 50V [M]
C165	ECEA1CKA100B	10 16V [M]
C166	ECEA1CKA100B	10 16V [M]
C167	ECEA1HKAR68B	0.68 50V [M]
C168	ECEA1HKAR68B	0.68 50V [M]
C169	ECEA1HKA4R7B	4.7 50V [M]
C170	ECEA1HKA4R7B	4.7 50V [M]
C171	ECEA1CKA100B	10 16V [M]
C173	ECBT1C103MS5	0.01 16V [M]
C174	ECEA1HKA4R7B	4.7 50V [M]
C175	ECEA1VU221B	220 10V [M]
C176	ECQV1H473JZ3	0.047 50V [M]
C177	ECBT1H102KB5	1000P 50V [M]
C178	ECBT1H102KB5	1000P 50V [M]
C179	ECBT1C103MS5	0.01 16V [M]
C180	ECBT1C103MS5	0.01 16V [M]
C181	ECBT1C103MS5	0.01 16V [M]
C182	ECEA1HKA4R7B	4.7 50V [M]
C183	ECQV1H474JZ3	0.47 50V [M]
C184	ECQP1152JZT	1500P 100V [M]
C185	ECQP2A472JZT	4700P 100V [M]
C186	ECEA1AKA470B	47 10V [M]
C187	ECBT1H101KB5	100P 50V [M]
C188	ECBT1H101KB5	100P 50V [M]
C193	ECBT1H102KB5	1000P 50V [M]
C194	ECBT1H102KB5	1000P 50V [M]
C201	ECEA1CKA101B	100 16V [M]
C202	ECBT1H104ZF5	0.1 50V [M]
C203	ECBT1H331KB5	330P 50V [M]
C204	ECBT1H331KB5	330P 50V [M]
C205	ECBT1C222KR5	2200P 16V [M]
C206	ECBT1C222KR5	2200P 16V [M]
C301	ECBT1H101KB5	100P 50V [M]
C302	ECEA1HM3R3B	3.3 50V [M]
C303	ECEA1HM3R3B	3.3 50V [M]
C304	ECBT1H101KB5	100P 50V [M]
C305	ECEA1CM100B	10 16V [M]
C306	ECBT1H101KB5	100P 50V [M]
C307	ECBT1H100JC5	10P 50V [M]
C309	ECEA1HM3R3B	3.3 50V [M]
C310	ECEA1HM100B	10 50V [M]
C311	ECFR1C104MR	0.1 16V [M]
C312	ECFR1C563KR	0.056 16V [M]
C313	ECFR1C103MR	0.01 16V [M]
C314	ECEA1HM010B	1 50V [M]
C315	ECFR1C333KR	0.033 16V [M]
C318	ECBT1H820KB5	82P 50V [M]
C322	ECEA1HM3R3B	3.3 50V [M]
C323	ECEA1HMR47B	0.47 50V [M]
C324	ECBT1H101KB5	100P 50V [M]
C325	ECEA1HM3R3B	3.3 50V [M]
C326	ECBT1H102KB5	1000P 50V [M]
C327	ECBT1H331KB5	330P 50V [M]
C328	ECEA1HM010B	1 50V [M]
C329	ECBT1H6R8KC5	6.8P 50V [M]
C330	ECKR1H223ZF5	0.022 50V [M]
C331	ECEA1HM010B	1 50V [M]
C332	ECEA1HM010B	1 50V [M]
C340	ECBT1H101KB5	100P 50V [M]
C342	ECKR1H223ZF5	0.022 50V [M]
C343	ECBT1C682MR5	6800P 16V [M]
C392	ECBT1H331KB5	330P 50V [M]
C401	ECBT1H101KB5	100P 50V [M]
C402	ECEA1HM3R3B	3.3 50V [M]
C403	ECEA1HM3R3B	3.3 50V [M]
C404	ECBT1H101KB5	100P 50V [M]
C405	ECEA1CM100B	10 16V [M]
C406	ECBT1H101KB5	100P 50V [M]
C407	ECBT1H100JC5	10P 50V [M]
C409	ECEA1HM3R3B	3.3 50V [M]
C410	ECEA1HM100B	10 50V [M]
C411	ECFR1C104MR	0.1 16V [M]
C412	ECFR1C563KR	0.056 16V [M]
C413	ECFR1C103MR	0.01 16V [M]
C414	ECEA1HM010B	1 50V [M]
C415	ECFR1C333KR	0.033 16V [M]
C418	ECBT1H820KB5	82P 50V [M]
C422	ECEA1HM3R3B	3.3 50V [M]
C423	ECEA1HMR47B	0.47 50V [M]
C424	ECBT1H101KB5	100P 50V [M]
C425	ECEA1HM3R3B	3.3 50V [M]
C426	ECBT1H102KB5	1000P 50V [M]
C427	ECBT1H331KB5	330P 50V [M]
C428	ECEA1HM010B	1 50V [M]
C429	ECBT1H6R8KC5	6.8P 50V [M]
C430	ECKR1H223ZF5	0.022 50V [M]
C431	ECEA1HM010B	1 50V [M]
C432	ECEA1HM010B	1 50V [M]
C440	ECBT1H101KB5	100P 50V [M]
C442	ECKR1H223ZF5	0.022 50V [M]
C443	ECBT1C682MR5	6800P 16V [M]
C451	ECBT1C103MS5	0.01 16V [M]
C453	ECBT1C103MS5	0.01 16V [M]
C454	ECBT1C103MS5	0.01 16V [M]
C455	ECBT1C103MS5	0.01 16V [M]
C456	ECBT1C103MS5	0.01 16V [M]
C457	ECBT1C103MS5	0.01 16V [M]
C458	ECEA1CM100B	10 16V [M]
C459	ECBT1H104ZF5	0.1 50V [M]
C460	ECEA1CM100B	10 16V [M]
C461	ECBT1H104ZF5	0.1 50V [M]
C462	ECEA1AM101B	100 10V [M]
C463	ECBT1C103MS5	0.01 16V [M]
C464	ECEA1HMR22B	0.22 50V [M]
C465	ECBT1C103MS5	0.01 16V [M]
C466	ECEA1HM010B	1 50V [M]
C467	ECEA1HM010B	1 50V [M]
C468	ECEA1HM330B	33 50V [M]
C469	ECEA0JKA221B	220 6.3V [M]
C470	ECBT1C103MS5	0.01 16V [M]
C471	ECBT1H221KB5	220P 50V [M]
C472	ECBT1H221KB5	220P 50V [M]
C473	ECEA1CM100B	10 16V [M]
C474	ECEA1CM220B	22 16V [M]
C475	ECEA1CM100B	10 16V [M]
C478	ECEA1HM2R2B	2.2 50V [M]
C479	ECBT1H104ZF5	0.1 50V [M]
C483	ECEA1EM101B	100P 25V [M]
C484	ECBT1C103MS5	0.01 16V [M]
C485	ECBT1C103MS5	0.01 16V [M]

Ref. No.	Part No.	Values & Remarks
C486	ECBT1H101KB5	100P 50V [M]
C487	ECBT1H101KB5	100P 50V [M]
C492	ECBT1H331KB5	330P 50V [M]
C493	ECBT1H221KB5	220P 50V [M]
C494	ECBT1H221KB5	220P 50V [M]
C500	ECKR2H103ZF5	0.01 500V [M]
C501	ECKR2H103ZF5	0.01 500V [M]
C502	ECKR2H103ZF5	0.01 500V [M]
C503	ECKR2H103ZF5	0.01 500V [M]
C504	ECKR1H103ZF5	0.01 50V [M]
C506	ECKR1H103ZF5	0.01 50V [M]
C508	ECKR1H103ZF5	0.01 50V [M]
C509	ECEA1HM220B	22 50V [M]
C510	ECEA1HM330B	33 50V [M]
C511	ECEA1JM221B	220 63V [M]
C512	ECEA1HM100B	10 50V [M]
C513	ECEA1HM222B	2200 50V ⚠ [M]
C514	ECEA1HM222B	2200 50V ⚠ [M]
C515	ECEA1VM222B	2200 10V ⚠ [M]
C517	ECEA1HM470B	47 50V [M]
C518	ECEA1HM470B	47 50V [M]
C519	ECKR1H103ZF5	0.01 50V [M]
C520	ECEA1AM470B	47 10V [M]
C521	ECEA1EM4R7B	4.7 25V [M]
C522	ECEA1HMR47B	0.47 50V [M]
C524	ECBT1C103MS5	0.01 16V [M]
C525	ECBT1C103MS5	0.01 16V [M]
C528	ECBT1C103MS5	0.01 16V [M]
C529	ECEA1HM330B	33 50V [M]
C530	ECEA1AM330B	33 10V [M]
C531	ECBT1C103MS5	0.01 16V [M]
C532	ECEA1HU101B	100 50V [M]
C541	ECKR1H103ZF5	0.01 50V [M]
C542	ECBT1C103MS5	0.01 16V [M]
C543	ECBT1C103MS5	0.01 16V [M]
C544	ECBT1C103MS5	0.01 16V [M]
C545	ECEA1HM010B	1 50V [M]
C546	ECBT1C103MS5	0.01 16V [M]
C548	ECKR1H103ZF5	0.01 50V [M]
C549	ECBT1C103MS5	0.01 16V [M]
C550	ECEA1AM470B	47 10V [M]
C551	ECBT1C103MS5	0.01 16V [M]
C552	ECEA1EM101B	100 25V [M]
C554	ECBT1H104ZF5	0.1 50V [M]
C701	ECEA0JKA330I	33 6.3V [M]
C702	ECUZNE104MBN	0.1 25V [M]
C703	ECEA0JKA101I	100 6.3V [M]
C704	ECUZNE104MBN	0.1 25V [M]
C705	ECUZNE104MBN	0.1 25V [M]
C706	ECUV1H272KBN	2700P 50V [M]
C707	ECUV1E273KBN	0.027 25V [M]
C708	ECUV1H472KBN	4700P 50V [M]
C709	ECUV1C473KBN	0.047 16V [M]
C710	ECUV1H182KBN	1800P 50V [M]
C711	ECUZNE104MBN	0.1 25V [M]
C712	ECUZNE104MBN	0.1 25V [M]
C713	ECUV1C104MBM	0.1 16V [M]
C714	ECEA0JKA101I	100 6.3V [M]
C716	ECUV1H561KBN	560P 50V [M]
C717	ECUZNE104MBN	0.1 25V [M]
C718	ECUV1C224KBN	0.22 16V [M]
C721	ECUV1H150JCN	15P 50V [M]
C722	ECUV1H150JCN	15P 50V [M]
C723	ECEA1AKA221I	220 10V [M]
C724	ECUV1C104MBM	0.1 16V [M]
C725	ECUV1H102KBN	1000P 50V [M]
C726	ECUV1H102KBN	1000P 50V [M]
C727	ECEA1HPK010I	1 50V [M]
C728	ECEA1HPK010I	1 50V [M]
C730	ECUZNE104MBN	0.1 25V [M]
C731	ECEA0JKA221I	220 6.3V [M]
C732	ECEA0JKA221I	220 6.3V [M]
C733	ECUZNE104MBN	0.1 25V [M]
C734	ECEA1AKA221I	220 10V [M]
C735	ECUZNE104MBN	0.1 25V [M]
C736	ECUZNE104MBN	0.1 25V [M]
C737	ECUZNE104MBN	0.1 25V [M]
C738	ECUV1C154KBN	0.15 16V [M]
C742	ECUV1E273KBN	0.027 25V [M]
C743	ECUZNE104MBN	0.1 25V [M]
C744	ECUV1E822KBN	8200P 25V [M]
C745	ECUV1C473MBN	0.047 16V [M]
C747	ECUV1H222KBN	2200P 50V [M]
C748	ECUV1H471KBM	470P 50V [M]
C749	ECUZNE104MBN	0.1 25V [M]
C751	ECUZNE104MBN	0.1 25V [M]
C752	ECUV1H152KBN	1500P 50V [M]
C753	ECUV1H471KBM	470P 50V [M]
C754	ECUV1H471KBN	470P 50V [M]
C802	ECBT1E103ZF5	0.01 25V [M]
C803	ECBT1H102KB5	1000P 50V [M]
C804	ECBT1H331KB5	330P 50V [M]
C805	ECBT1H331KB5	330P 50V [M]
C806	ECBT1H561KB5	560P 50V [M]
C807	ECBT1H104ZF5	0.1 50V [M]
C808	ECBT1H104ZF5	0.1 50V [M]
C809	ECBT1H561KB5	560P 50V [M]
C810	ECEA1VKA100B	10 10V [M]
C811	ECBT1H101KB5	100P 50V [M]
C812	ECBT1H101KB5	100P 50V [M]
C813	ECBT1H101KB5	100P 50V [M]
C814	ECBT1H101KB5	100P 50V [M]
C815	ECEA0JM102B	1000 6.3V [M]
C816	ECBT1H102KB5	1000P 50V [M]
C817	ECEA0JM101B	100 6.3V [M]
C818	ECEA0JM102B	1000 6.3V [M]
C819	ECBT1H102KB5	1000P 50V [M]
C820	ECBT1C103MS5	0.01 16V [M]
C821	ECBT1H331KB5	330P 50V [M]
C822	ECBT1H561KB5	560P 50V [M]
C823	ECBT1H561KB5	560P 50V [M]
C825	ECEA1AKA220B	22 10V [M]
C834	ECBT1H561KB5	560P 50V [M]
C838	ECBT1H561KB5	560P 50V [M]
C839	ECBT1H561KB5	560P 50V [M]
C840	ECBT1H561KB5	560P 50V [M]
C845	ECEA0JKA470B	47 6.3V [M]
C849	ECEA1HKA0R1B	0.1 50V [M]
C850	ECEA1HKA0R1B	0.1 50V [M]
C853	ECBT1C103MS5	0.01 16V [M]
C856	ECEA1HKA0R1B	0.1 50V [M]
C858	ECEA1HKA0R1B	0.1 50V [M]
C859	ECBT1E103ZF5	0.01 25V [M]
C860	ECBT1H101KB5	100P 50V [M]
C863	ECBT1H101KB5	100P 50V [M]
C865	ECBT1H150JC5	15P 50V [M]
C866	ECEA1VKA100B	10 10V [M]
C868	ECBT1H180JC5	18P 50V [M]
C869	ECBT1H680J5	68P 50V [M]
C870	ECBT1H680J5	68P 50V [M]
C871	ECEA1HKA010B	1 50V [M]
C872	ECBT1H560J5	56P 50V [M]
C873	ECBT1H560J5	56P 50V [M]
C875	ECEA1HKA010B	1 50V [M]
C876	ECBT1H102KB5	1000P 50V [M]
C877	ECEA1HKA3R3B	3.3 50V [M]
C878	ECBT1H102KB5	1000P 50V [M]
C879	ECBT1C103MS5	0.01 16V [M]
C880	ECBT1C103MS5	0.01 16V [M]
C881	ECBT1H471KB5	470P 50V [M]
C882	ECBT1H102KB5	1000P 50V [M]
C883	ECBT1H102KB5	1000P 50V [M]

Ref. No.	Part No.	Values & Remarks

■ Packing Materials & Accessories

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list .
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area)
Parts without these indications can be used for all areas.
* The "(SF)" mark denotes the standard part.
* [M] Indicates in the Remarks columns indicates parts supplied by **MESA.**
* Remote Control Unit : Supply reriod for three years from terminal of production.

Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX0378	CARTON BOX	[MBV]
P2	RPFX0007	BAG (SET)	[M]
P3	RPNX0067	POLYFOAM	[MBV]
P4	SPSD152	ACCESSORY CASE	[M]
		ACCESSORIES	
A1	EUR644344	REMOTE CONTROL	[M]
A1-1	UR64EC1822-3	R. CONTROL COVER	[M]
A2	RSA0007	FM ANTENA	[M]
A3	RSA0010	AM LOOP ANT	[M]
A4	VJA0733	AC CORD (SF)	[M](EB)⚠
A4	RJA0019-2K	AC CORD (SF)	[M](EG)(E)⚠
A5	RFKSAK20EK	INSTR. MANUAL ASS'Y	[MBV](E)
A5	RQT3774-B	INSTR. MANUAL	[M](EB)
A5	RFKSAK20EGK	INSTR. MANUAL ASS'Y	[MBV](EG)
A6	SJP9009	ANT ADAPTER	[M](EB)
		PCB	
	REPX0109	SERVO PCB	[M]
	REP2182A-N	LOADING PCB (DET. SW. 1/2)	[M]
	REPX0108	MECHANISM (DECK 2) PCB	[M]
	REPX0108A	MECHANISM (DECK 1) PCB	[M]
	REPX0114B	MAIN PCB	[MBV]E, EG
	REPX0114C	MAIN PCB	[MBV] EB
	REPX0113B	OPERATION PCB	[MBV]
	REP2200J	DECK PCB	[MBV]
	REP2000L	TUNER PCB	[MBV]

Ref No.	Part No.	Part Name & Description	Remarks

Ref No.	Part No.	Part Name & Description	Remarks

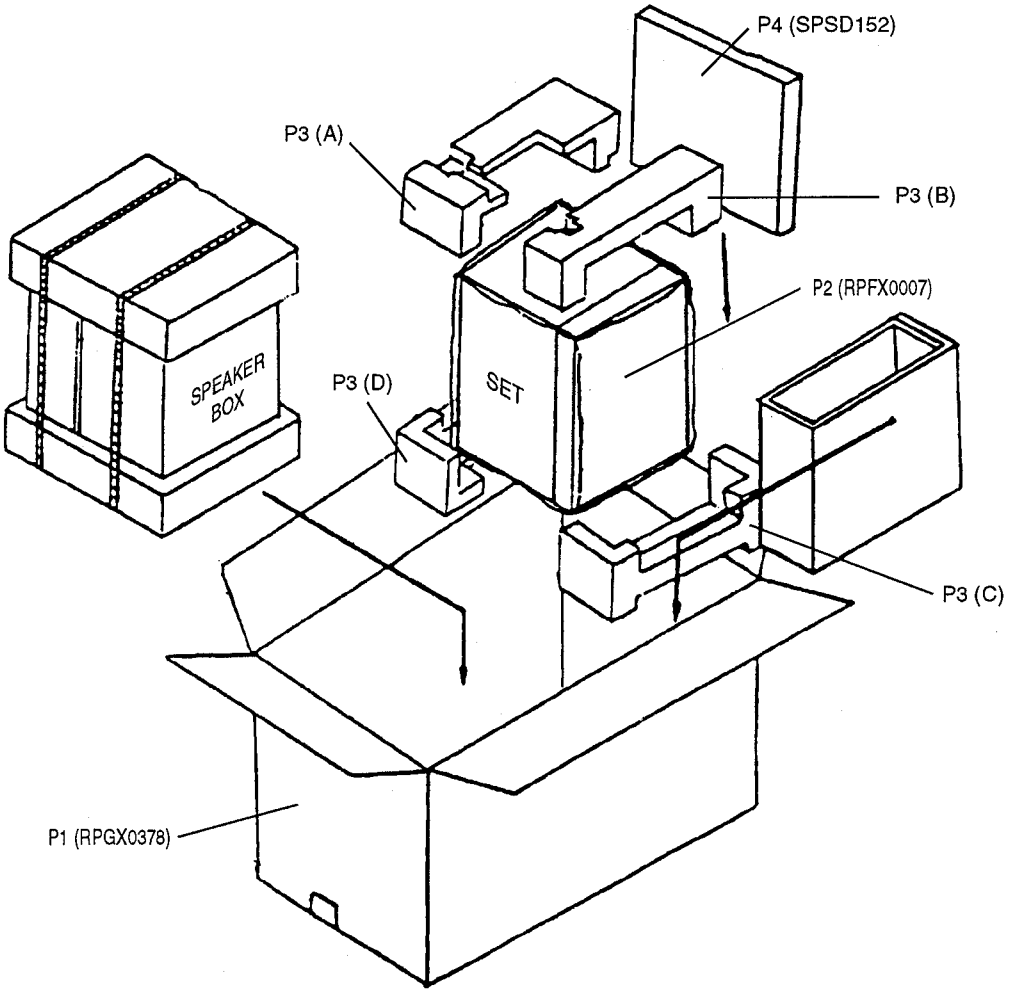
■ Packaging

ACCESSORY

A1 (EUR644344)	: REMOTE CONTROL UNIT
A3 (RSA0010)	: AM LOOP

FAN BAG

A2 (RSA0007)	: FM ANT
A4 (VJA0733)...EB	: AC CORD
A4 (RJA0019-2K)...EG,E	: AC CORD
A5 (RFKSAK20EK)...E	: INSTR. MANUAL ASS'Y
A5 (RQT3774-B)...EB	: INSTR. MANUAL
A5 (RFKSAK20EGK)...EG	: INSTR. MANUAL ASS'Y
A6 (SJP9009)...EB	



P3 (RPNX0067)
- P3 (A)
- P3 (B)
- P3 (C)
- P3 (D)